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INDEX TO VOLUME 85

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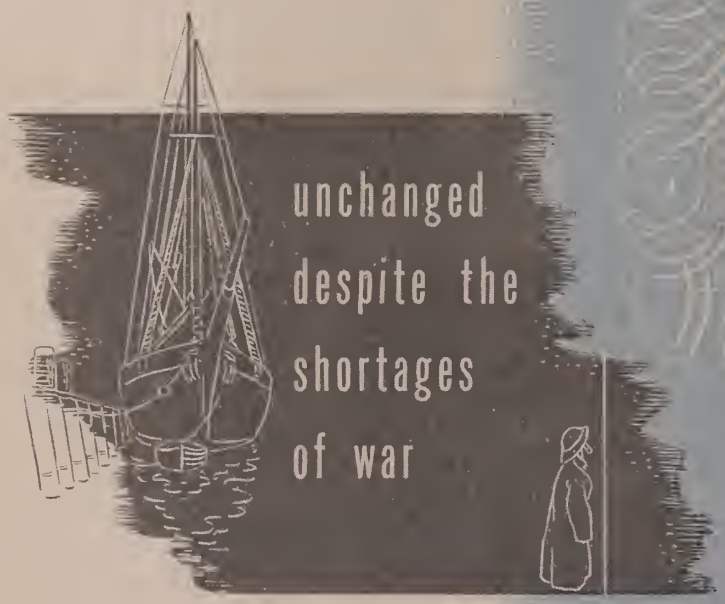
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Malingering in Nurses with Hysteria

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* B. Zondek, *J.A.M.A.*, 118: 705, 1942. M. Berlind, *J. Clin. Endocrinol.*, 3: 457, 1943

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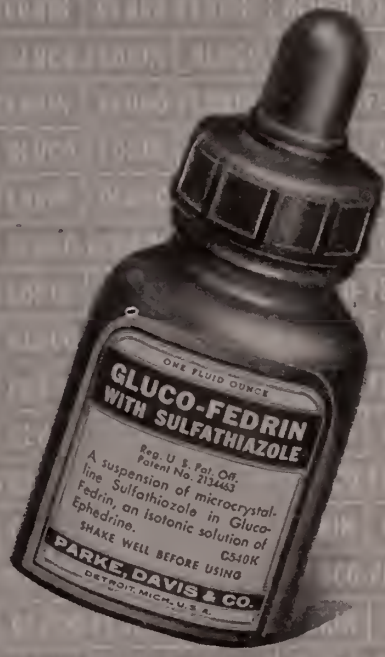
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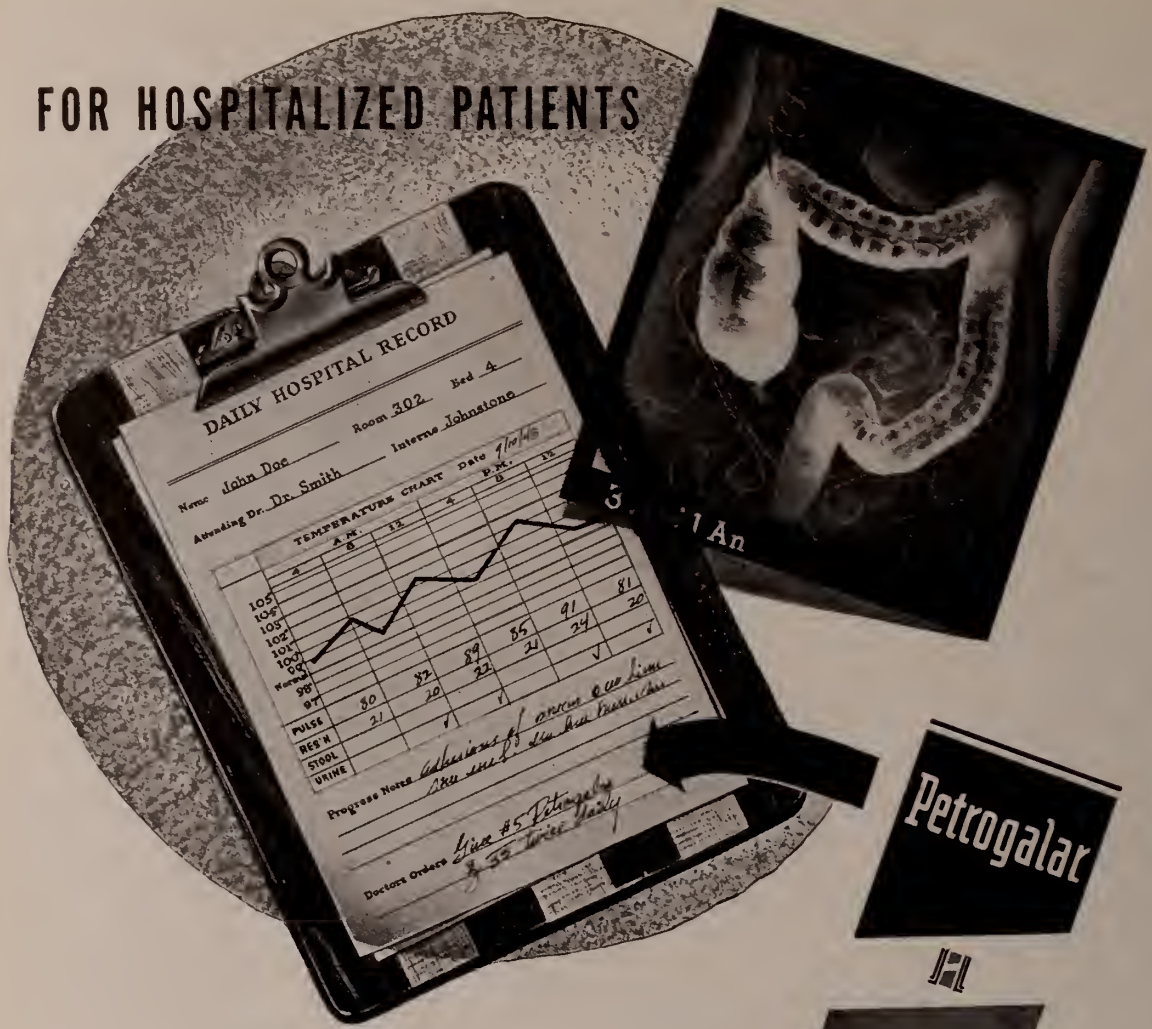
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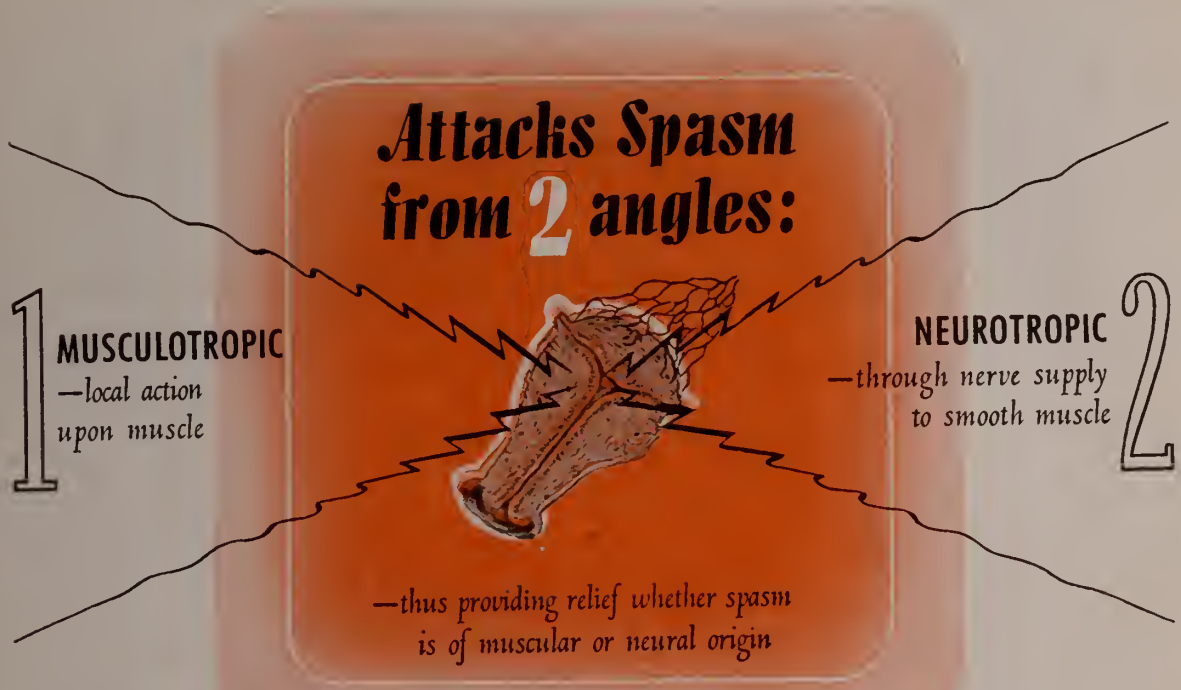
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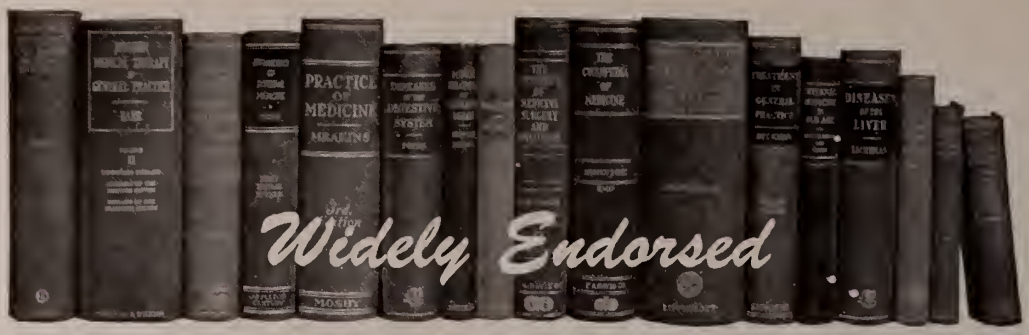
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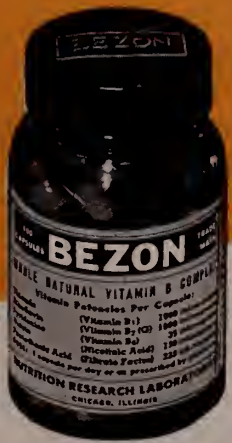
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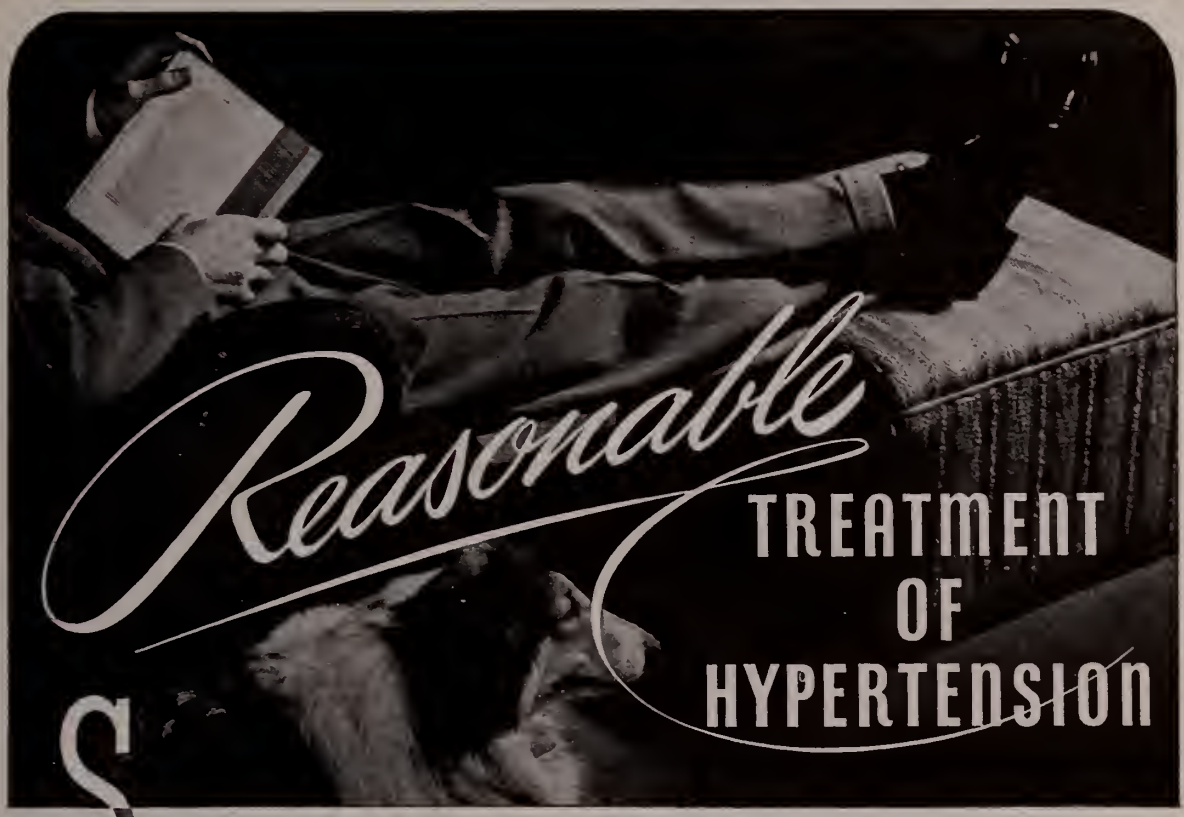
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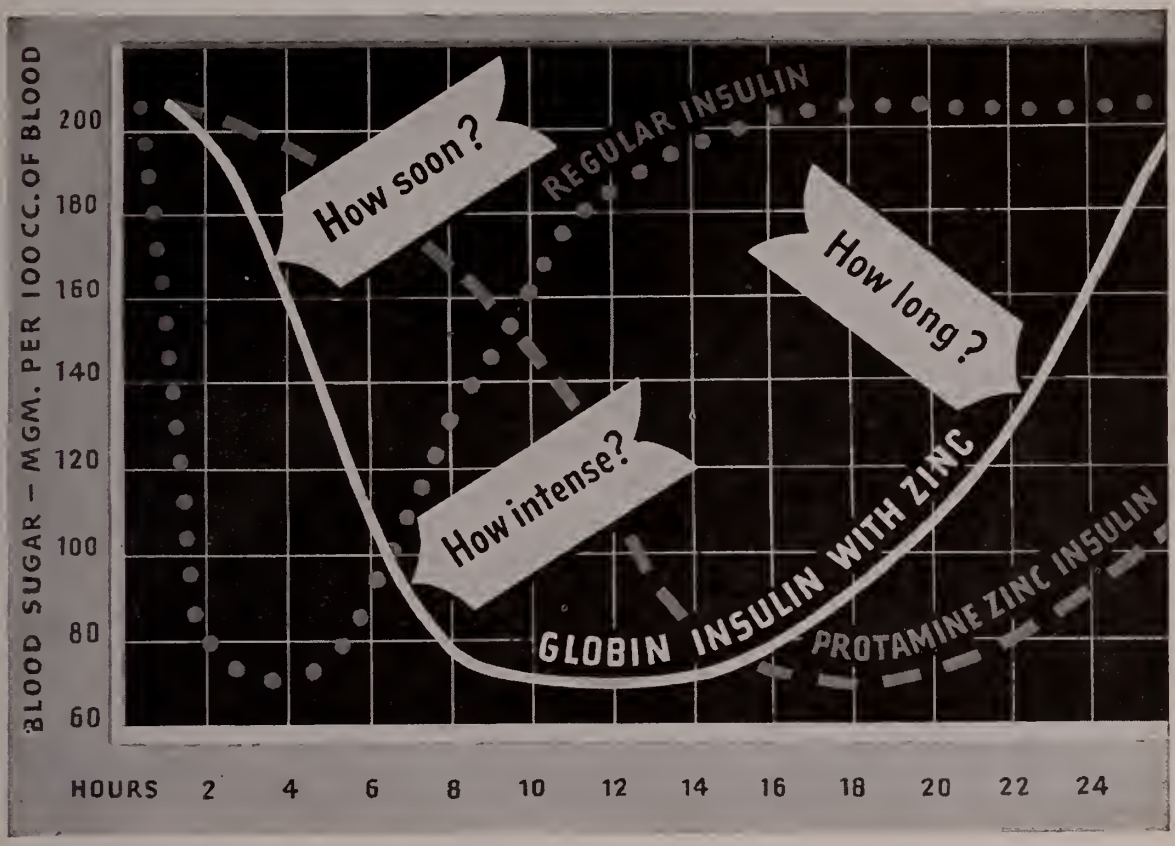
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## Borden's complete infant formula

**To conserve vital tin, we are now packaging Biolac in 13-fl.-oz. cans instead of the former 16-fl.-oz. size. The new Biolac is more highly concentrated but the new smaller can contains identically the same food values.**

**Now each fl. oz. of Biolac should be diluted with 1½ fl. ozs. of water and not 1 fl. oz. as formerly.**

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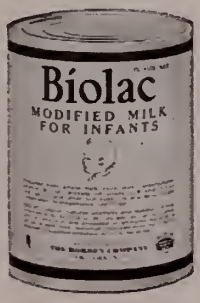
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**CAL-C-TOSE 'ROCHE'** THE PLEASANT WAY TO TAKE VITAMINS

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*FIGHT INFANTILE PARALYSIS · JANUARY 14 TO 30*

January, 1944
VOL. 85, NO. 1

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Official Journal of the Illinois State Medical Society

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## Editorials

### YES, WE SHOULD BE THANKFUL!

On this, the third New Year's Day since Pearl Harbor and the outbreak of war, we should take inventory and see if, after all, there are not many things for which we practitioners of medicine can be thankful. Then, as a New Year's Resolution, we should be determined that we will not only carry on for another year, but also endeavor in every way possible to make the year 1944 a still greater one to the very limit of our ability.

During the more than two years of war many demands have been made upon the medical profession of this country. As usual, the response to the calls of our government has been most gratifying indeed. There are more physicians wearing military uniforms today than ever before, and each day additional medical officers are being commissioned. These men give up their practice, leave their homes and families because they are needed for the successful waging of this war. Very few protests on the part of these physicians are registered. All are thoroughly impressed with the importance of their work, and are firmly determined to do everything possible to aid in bringing the world wide conflict to a successful termination.

Physicians above the present service age limit and those who through no fault of their own, have been found physically incapacitated for service, are also thoroughly determined to carry on, on the home front. In many instances physicians who had retired from practice, are back in harness and are again caring for the sick and afflicted. Many are willing to be relocated, going into communities where medical personnel has been depleted seriously and where their services are needed urgently.

Illinois has contributed freely to our armed forces, not only of men for the fighting forces, but likewise several thousand physicians have been commissioned, and for the first time, many women are in various branches of the service.

We are all looking forward to that day when once more there will be peace on earth and good will toward all men; when wars are abolished and there will be a general rejoicing throughout the world; when the thoughts of all people will be directed toward constructive rather than destructive forces; and when even greater efforts will be made toward advances in science, industry, and in medicine.

Yet we have in this troubled world, many things for which to be thankful. Yes, there is a war on — a terrible war involving most of the countries of the civilized world. It makes one wonder what civilization really means when men are forced to think and act only in terms of killing and destruction. We have seen in this war troops with the highest type of morale ever seen

anywhere in wartime. Our troops, with no thought of acquiring more territory for their country, are fighting to overcome the dangers of aggression, expansion and conquest. Naturally everyone at this time of the year, thinks of home, and loved ones, and is looking forward to the day when he may again take his place in a community free from strife and dangers such as have been seen in recent years.

We know that in contrast with World War I, the death rate from the many casualties in battle has been reduced from 15% to approximately 2.-5% to 3%. This is due largely to the developments in medical science during recent years, combined with the fact that the Surgeons General of the Army and Navy have available not only a larger number of medical men in uniform, but also the best qualified medical corps to be found anywhere among armed forces. We should not argue when we are told that more medical officers are needed, even though so many thousands of physicians are already in service. With the present arrangement, facilities are available to give first aid care to front line troops a short time after they are injured. Provisions have been made whereby shock is treated almost immediately at the front, in contrast to the necessity in previous wars of transporting injured to the rear, frequently many miles from the battle lines.

With present day organization of the medical corps, major operations to save life are performed near the front; plasma, blood, and blood substitutes are given virtually where the men fall, and the sulfa drugs are available everywhere.

Long before the conflict starts the qualifications of each physician are well known; each man is given work according to his ability to render adequate service. Highly competent surgeons do the surgical work, and this service is not undertaken by unqualified men who have had medical rather than surgical training. As the Generals plan the battle long before it is really under way, so does the medical organization in time of


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war, properly plan for every type of emergency which can develop subsequently.

Sanitary corps likewise provide the safest water supplies and give maximum protection to the health interests of our troops. Dangers of epidemics are minimized; and with present day immunizations our troops are better protected than ever before in time of war.

So American parents whose sons are with our armed forces are comforted materially in the knowledge that when casualties develop, their boys have better care than ever before. The chances for recovery from serious injuries are excellent. The early recognition and treatment of shock, treatment of burns, and the many other types of injuries seen frequently in warfare, with the present day front-line organization of medical personnel, has greatly minimized the number of fatalities.

We know that nowhere in the world today is better medical care received than that which is given to our men in the armed forces. Surely this is something for which every loyal American can be thankful. The year 1944 is unquestionably going to be a most critical one for all, yet we hope and pray that at the close of this year we will have much more for which to give thanks than can be anticipated at this time.

TO THOSE IN THE MIDST OF CONFLICT AS WELL AS TO THOSE WHO CARRY ON AT HOME, WE WISH YOU A SUCCESSFUL AND VICTORIOUS NEW YEAR.

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## RELATIVE TO YOUR INSURANCE POLICY

During recent weeks the Illinois State Medical Society offices and the office of the Chicago Medical Society have received numerous calls asking for information concerning an insurance company which had been permitted to advertise in the Illinois Medical Journal. It had been intimated that certain agents of the Company had told some physicians that the Company and its policy had been approved by the State Medical Society.

The Illinois State Medical Society has never officially endorsed either an insurance company nor any policy. The Society has gone on record as not favoring any type of blanket policy issued to the Society so that members would be eligible to procure policies as preferred risks. The policy which has been issued recently to many Illinois physicians has never been submitted to the Society or to its Council, although the company issuing the policy has been permitted to use the Journal as an advertising medium.

The Illinois Medical Journal, however, before permitting any Company to advertise in its columns, first investigates the concern to be sure that it is thoroughly reliable and worthy of advertising consideration. Several physicians have asked if this policy would remain in force only as long as a certain number of policies were in force. We have been told by a representative of the Company that the policy will remain active and in force at no increase in rate regardless of the number of policies issued or maintained.

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## SPECIAL NOTICE TO MEMBERS

Most professional groups or societies find it inexpedient to make specific endorcement of any company or plan to its members. It is the practice of the Mutual Benefit Health and Accident Association of Omaha, Nebraska, to submit their Disability Life Annuity plan to the individual members of the group for their personal consideration. This has proven to be the most successful way to complete the enrollment of members of these groups since it brings about a decidedly better understanding of the plan to the members and thereby, increases the ultimate total enrollment.

The Illinois enrollment has proceeded most satisfactorily, but it is the desire of the Company, to not only conduct the enrollment in the manner found to be the most successful for completing the group, but with full consideration for the policy and practices of the Society and its Directorate.

Therefore, should any Authorized Registrar or Mutual Benefit salesman represent that he is from the Illinois Medical Society or that this plan has been endorsed by the Society, will you kindly report same together with the name of this representative to B. W. Boyd, Illinois State Manager, Professional Group Department, room 614, 220 So. State Street, phone Harrison 2380.

Your co-operation in reporting such will be much appreciated by the Company.

## PAPERS FOR THE ANNUAL MEETING

Any member of the State Medical Society desiring to present a paper should write to the proper section officer telling the title of the paper, and giving a short synopsis of the material he has in mind for the paper. In this way the officers of the sections will be better enabled to tell whether or not they are willing to schedule the paper for the program for which they are responsible.

### Section Officers

Section on Medicine
George B. Stericker, Chairman, Springfield
Laurence E. Hines, Secretary, 104 S. Michigan Blvd., Chicago

Section on Surgery
Joseph S. Lundholm, Chairman, Rockford
G. E. Johnson, Secretary, 1000 W. 59th Street, Chicago

Section on Eye, Ear, Nose and Throat
George Woodruff, Chairman, Joliet
Sanford N. Gifford, Secretary, 720 N. Michigan Ave., Chicago

Section on Public Health and Hygiene
R. R. Cross, Chairman, Springfield
E. A. Piszczek, Secretary, 737 S. Wolcott Avenue, Chicago

Section on Radiology
Fay H. Squire, Chairman, 1753 W. Congress St., Chicago
P. R. Dirkse, Secretary, Peoria

Section on Obstetrics and Gynecology
C. J. Heiberger, Chairman, Peoria
J. P. Greenhill, Secretary, 55 E. Washington St., Chicago

Section on Pediatrics
Robert Cummings, Chairman, 400 E. 79th Street, Chicago
John Carey, Secretary, Joliet.

## THE FOURTH WAR LOAN

The Fourth War Loan begins January 18th. Fourteen billion is the goal; five and one-half billion to be sold to individuals.

All doctors will of course want to keep up their bond buying in support of the war effort in addition to the time and labors they are giving to either military or civilian needs.

Your Journal does not presume to prescribe procedure for doctors but hopes that every member of the medical profession will cooperate with the treasury's state, county and local war bond committees in every possible way.

We expect treasury representatives to meet with the officers of the Illinois State Medical Society on January 8th and 9th and we shall undoubtedly have more to say on this subject in our next issue.

## FIRST THREE CASES OF PINTA IN U. S.

The first 3 cases ever reported in continental United States of pinta, a nonvenereal type of spirochetosis (infection with a spirochete) limited almost exclusively to the dark races, are the subject of a report by E. P. Lieberthal, M.D., Chicago, in *The Journal of the American Medical Association* for November 6. There is no reason, however, the author says, why the disease should be limited to any country or even to the tropics. In all probability there are in the southern part of the United States persons with pinta which has been diagnosed as some other type of skin disease. The 3 patients he reports were born respectively in Canada, Louisiana and Alabama.

There are three stages of the disease — in the late stage the complications include high blood pressure and lesions of the heart and blood vessels. An attack confers immunity and no case has been reported in which pinta was of venereal origin. Treatment is similar to that of syphilis — by arsenical preparations.

Three hundred and fifty million work days lost annually through illness of the gainfully employed is our country's discreditable record. At a wage of five dollars a day this means a $1,750,000,000 yearly deficit in labor and production. Assuming that half of this is due to preventable disease we could build a dozen battleships in the time saved by full use of known preventive measures.

In working days lost per case, tuberculosis heads the list of unnecessary disabilities. This national loss is not due alone to doctors, nor the public health service, nor the ignorance and carelessness of the people themselves. The blame belongs to all three. The fervor of patriotism sweeping the country keeps our eyes fixed overseas. We are united in the will to annihilate despotism and reestablish freedom for all nations. This is our duty, but we must not forget the treacherous enemy within our own boundaries. Tuberculosis, in collusion with its fellow fifth columnists, is impeding victory by a campaign of sabotage behind the lines.

The armed forces have foreseen the menace of tuberculosis in the ranks and are taking active measures to combat it. Industry has awakened to the threat but is still floundering in its effort to thwart it. The medical profession is only half alive to its opportunities for patriotic service. Right now is the moment to stand by the men who make the guns in an all-out fight to eradicate this leading saboteur of victory. — *Kendall Emerson, M.D., Journal Lancet.*

# Correspondence

## THE CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE

### Three Intensive Post-Graduate Days In A Great Medical Center

### March 14, 15, 16, Stevens Hotel Chicago

The Chicago Medical Society is holding its First Annual Clinical Conference at the Stevens Hotel, Chicago on March 14, 15, 16. There will be three intensive post-graduate days divided into half hour periods with two one-hour panel discussions on medicine and surgery. The following fields of medicine will be covered: Surgery, Medicine, Obstetrics and Gynecology, Dermatology, Pediatrics, Industrial Medicine, Allergy, Urology, Anesthesia, Contagious Diseases, Pathology, Neurology and Psychiatry, Orthopedics, Endocrinology, Eye, Ear, Nose and Throat. Speakers renowned in the above fields, both national and local, will contribute to the program.

There is a growing feeling on the part of our national medical leaders that this is a time when medical education should be continued. The Chicago Medical Society is of the opinion that the sponsoring of an annual clinical conference for physicians of the Middle West will become an important function of the Society.

The program will appear in our February issue and doctors of the state will find many interesting features. Plans should be made now to attend this meeting.

## ILLINOIS INITIATES

A recent release from the American College of Surgeons shows the following physicians were admitted to membership during the year 1943:

| | |
|---|---|
| Hubert L. Allen | Alton |
| M. Fletcher Austin | Chicago |
| S. Glidden S. Baldwin | Danville |
| Sam W. Banks | Chicago |
| C. Louise Clancy | Chicago |
| John D. Claridge | Chicago |
| Fay S. Comer | Cairo |
| William C. Doepp | Blue Island |
| Walter R. Fallon | Chicago |
| Liborio Figueroa | Chicago |
| Paul F. Fox | River Forest |
| John H. Gernon | Champaign |
| Lewis A. Griffin | Alton |
| John A. Gubler | Chicago |
| John W. Howser | Oak Park |
| James T. Jenkins | Peoria |
| Arthur K. Koff | Chicago |
| Richard H. Lawler | Chicago |
| Frederick W. Merrifield | Chicago |
| Joseph T. Meyer | Chicago |
| John H. Pribble | Chicago |
| Roland I. Pritikin | Oak Park |
| S. Perry Rogers | Chicago |
| Kenneth H. Schnepp | Springfield |
| William F. Seifert | Rockford |
| Hyman S. Sugar | Chicago |
| Janet E. Towne | Chicago |
| Herbert L. Udesky | Chicago |
| Louis S. Varzino | Chicago |

## MEDICAL AND SURGICAL RELIEF COMMITTEE

Dear Doctor:

There is a critical need for medical and surgical supplies that may lie hidden and forgotten in your office: discarded or tarnished instruments ... surplus drugs ... vitamins ... infant foods. Collected, packaged, sent to the Medical and Surgical Relief Committee, they can play a vital role in its program of medical relief for the armed and civilian forces of the United Nations.

Surgical instruments and medicines are sought after by physicians and pharmacist's mates of our Navy . . . are hungrily snatched by the medical corps of our Allies. The work of war-zone hospitals and welfare agencies is too often crippled by the lack of medical supplies. Community nurseries in this country, refugee camps abroad cry out for vitamins and baby foods for their ill-nourished charges.

In the pages of this journal you may have read about the Committee. It has supplied over 900 sub-hunting and patrolling ships of the Navy with emergency medical kits; equipped battle-dressing stations on battleships, destroyers, and cruisers. The Committee's roll-call of medical requests—not one of which has been turned away—reads like a world geography: the Fighting French in North Africa and Tahiti; the Royal Norwegians in Canada and Iceland; the West Indies; South and Central Africa; China; India; Great Britain; Yugoslavia; Greece; Syria; Russia; Alaska and of course, the United States.

To meet the demands that pour into headquarters, the Committee needs all types of instruments, especially clamps, scalpels, forceps, and all kinds of drugs from iodine to sulfa products. By contributing what you can spare, you will help speed another shipment of sorely-needed medical aid.

Very sincerely yours,
Joseph Peter Hoguet, M. D.
Medical Journal

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## ANNOUNCEMENT

Effective January 1st, 1944, the Executive Office of The American Board Of Ophthalmology will move to P. O. Box 1940 Portland 2, Maine. Please address all Board correspondence to this new address.

## NATIONAL CONFERENCE ON MEDICAL SERVICE

The 18th annual meeting of the National Conference on Medical Service will be held on February 13 in the Red Lacquer Room of the Palmer House in Chicago.

This conference is the only discussion meeting of its kind on the social and economic relationships of medicine and it provides the one opportunity of the year for representatives of organized medicine from all parts of the country to get together for informal discussion of the grave issues confronting the profession today.

The conference is not in any sense an official body of organized medicine. But action initiated in its discussions last year was crystallized in the formation of the New Council on Medical Service and Public Relations by the House of Delegates of the American Medical Association in June. Its forum affords the rank and file of medicine an important opportunity for expression which may have far-reaching results for the future of medicine.

The program this year is not yet complete but it is understood that it will stress the post-war problems and responsibilities of medical organized medicine which must provide not only for the orderly re-establishment of thousands of medical officers returning from military service, but must foster and guide a constructive national program for the improvement and better distribution of medical services to the American people.

The 1944 conference officers are W. L. Burnap, M. D. of Fergus Falls, Minn., President, and C. L. Palmer, M. D. of Pittsburgh, Secretary.

In accordance with an established precedent the meeting is held on the day before the Annual Congress on Medical Education and Licensure so that as many as possible can arrange to be present at both meetings. Every member of organized medicine is cordially invited to attend and every state association is especially urged to see that it is well represented.

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*War is no laughing business, yet it is a business we shall all do better if once in a while we take time out to laugh.—Lincoln.*

# Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

Working hard December 14th to clear the tracks for a short vacation the writer had one job yet to do, and that was to write this article.

Zero weather was approaching but as we slipped into a well heated car and went to the station we turned on the radio for the latest war news and reports; and once at the station boarded the Santa Fe Super Chief. We ate dinner in comfort and ease, retired to comfortable quarters and traveled west. As one travels west either by auto, by train or by plane one relaxes and thinks of this great country. As one sees railroads carved through the hills, mountains, valleys and over rivers; as one sees the telephone wires stretching across these same areas; as one sees large cities developed and great agriculture areas developed; one stops and thinks not so much about the "Forgotten man" of today but about the "Forgotten men" of yesterday. The men who pioneered this great country, who risked their fortunes, their lives, their health, their families, their all in grim determination. Perhaps we should not complain so much about how hard we have it with our heated homes, our baths with hot and cold water, our telephones, our autos, our radios, our food, etc., and just sit back and praise the forgotten men from the beginning to the present who have made all that we have possible. We are a pretty weak race that cannot stand the few inconveniences that we have today or have had in the last fifty years in this country.

Congress adjourned for the Holidays. Many thought they should have stayed on the job. I think it was a good thing they went home, not because they were over worked or mentally fatigued, but more because they are politically fatigued. They are afraid to either support or not support the administration. They would like to falter around as long as possible to determine which way the wind is blowing and then get in the hurricane. Many of them have known they were wrong for the past ten years, but they are politicians and not statesmen. Perhaps a change of air will ventilate their mental recesses and perhaps they will return thinking of the United States of America, and not a political party. They show some signs of recovering from their anaesthesia because the people are administrating a hypodermic to arouse them from their slumbers.

Labor has not pleased many of the politicians, the farmers or our armed forces. The constant threat of strikes for various reasons, and actual strikes in vital industries is not the democratic way of fighting for what we are fighting for. Such things as demanding vitamin pills daily, better places for rest periods, time and a half for over time and holidays is not pleasing to the man in the front line. The politicians have little to criticise labor for. They accepted labor's cash for campaigns and promised labor security of every sort. Apparently they never dreamed that the well would run dry. That more taxes mean more bureaus; that more bureaus mean more taxes; and that eventually labor would be taxed. But it has come to pass and thus demands more pay. More pay is not the answer to their problems because more pay only means more inflations and higher cost of living. The answer is for economy in government expense and a reduction in taxes for labor and all others. Labor and government cannot continue to mash the problem by various forms of subterfuge such as

was used in the miners settlement, and is now being proposed for the settlement of the threatened railroad strike. Nor can government mash the issue of the increased cost of living by subsidies. The people are beginning to watch.

Peace is now being openly discussed. We are winning the war and so they say we must win the peace. Much has been written about the four freedoms, the United States of the world, or some form of an international organization that will guarantee the four freedoms; guarantee economic equality among nations; guarantee peaceful nations against aggressor nations etc., and that out of this organization wars will be ended. But as we approach the problem there seems to be more general agreement among writers who combine the ideal and the practical that it will have to be a power peace. They hope that in time this power peace, which must be a military peace, can be replaced by a permanent peace not based upon military power. The question is can we avert another world war before that time comes? It is generally agreed that there can be no peace without power — until man's selfishness is abolished and honesty sits in both high and low places. That's a long way off. Can a power peace be maintained as long as men are selfish and dishonesty sits in both high and low places? I think not. Just as we are to have a power peace we are destined to have power politics in the peace, and this power politics will be just as dangerous to an enduring peace as military power peace will be. Both of them certainly give us food for thought and will call for real statesmanship for years to come. We are developing a power politics in our own country. It is not entirely new. It has passed from a somewhat obscure small group of power politics, controlled by capital to a new larger group. It is in a new capsule. It has a new potency. It is out in the open. It is advertised, it is publicised. It maintains a large office in Washington and disperses its orders throughout the land. It is the C. I. O. in the front line with other labor organizations following along. It proposes to tell its members who to vote for, what they expect to get for such support. They will probably even go so far as to appropriate funds for their selected candidates. Long a believer in unions the writer cannot see a democracy surviving such power politics and concludes that the unions are writing their own downfall just as the smaller power politics of capital wrote theirs a few years back.

How does this affect medicine? Medicine forms a part of our political, social, and economic problems and it will suffer as the result of any policy or program that destroys the fundamentals of democracy. If we are looking for world peace we can best assure it by demonstrating to the world that we are dethroning dishonesty and graft.

R. K. Packard, M.D., Chairman
Committee on Medical Economics.

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## CONTRACEPTIVE PREPARATIONS ACCEPTED

The first list of contraceptive preparations and devices accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in its publication, New and Nonofficial Remedies, is published in the December 18 issue of *The Journal* of the Association.

In its announcement the Council says that "At its annual meeting in 1942 the Council on Pharmacy and Chemistry declared contraceptives eligible for consideration on the same basis as therapeutic (treatment) agents. Prior to this time the Council's consideration of the contraceptive problem had consisted in sponsoring with the Council on Physical Therapy ( of the Association) occasional status reports. To aid the Council in its considerations, an Advisory Committee consisting of outstanding authorities in this field was formed and it prepared a set of criteria so that contraceptive agents might be evaluated consistently and fairly . . . . The Council on Pharmacy and Chemistry has reviewed the status of appliances submitted by two firms but voted to refer all other submissions of appliances to the Council on Physical Therapy. Thus there follows on these pages a description of certain physical devices which received early consideration by the Council on Pharmacy and Chemistry.

"The Council has also authorized publication (in this issue of *The Journal*) of a status report by Dr. Robert L. Dickinson (of New York), a statement of actions and uses for New and Nonofficial Remedies, and Criteria on which such contraceptive agents have been examined. As pointed out, these criteria may be changed as experience grows."

# Medicine's Role in the War Effort

## TROPICAL DISEASES IN RETURNING MILITARY PERSONNEL

*(Note: — The publication of this statement has been requested by the Subcommittee on Tropical Diseases of the National Research Council. The statement has the approval of the Division of Medical Sciences, National Research Council, and of the Surgeons General of the Army, Navy and Public Health Service. — Ed.)*

The military forces of the United States operating in tropical and subtropical areas are exposed to a number of diseases which occur only in those areas or are much more prevalent there than in this country. Some if these diseases will be brought back to this country in returning military personnel and may be seen by civilian practitioners of medicine either in persons infected abroad or in persons to whom the diseases have spread from the original cases. It is important that physicians be familiar with the diseases which may be imported, and that they be on the alert to diagnose and treat them correctly and to prevent their spread.

### Malaria

Malaria is the most important of these diseases. In most tropical regions Falciparum malaria,[1] the severe form of the disease, predominates. Vivax malaria is also common. Malariae malaria is relatively rare, and ovale malaria is very rare. Neither quinine nor atabrine prevents malarial infection. Suppressive treatment, formerly incorrectly termed "drug prophylaxis," will usually prevent clinical symptoms and keep infected persons on their feet as long as they continue such treatment, but many of them come down with clinical malaria within a few weeks after stopping treatment. Such cases are more likely to be caused by Plasmodium vivax than by Plasmodium falciparum. Vivax malaria is prone to relapse several times even after supposedly adequate courses of treatment. Some military and civilian personnel, returning to this country by air, become infected while stopping in highly malarious areas en route. These persons have their first attack of malaria, usually falciparum infection, after arriving in this country. The symptoms may be obscure and the disease not suspected, and coma or even death may ensue before the diagnosis is made.

Malaria should be suspected in every person returning from the tropics or subtropics. The disease may simulate almost any acute or chronic abdominal condition, upper respiratory or pulmonary conditions, meningitis, encephalitis, coma from other causes, or primary or secondary anemia. Blood examination should be made as soon as the patient is seen, using both thin and thick smears in order to afford the best chance of finding parasites. Species identification should be made by a competent technician, and the disease should not be excluded until several blood examinations have been made at intervals of six to twelve hours. Vigorous treatment must be instituted promptly to avoid fatalities and to diminish the incidence of relapses.

It is possible that local outbreaks of malaria

1. In the interest of more accurate diagnosis and better treatment, physicians are urged to use the etiologic terminology in differentiating the four malaria infections of man as follows: falciparum malaria (instead of estivoautumnal, subtertian, malignant tertian, tropical or pernicious malaria), vivax malaria (instead of tertian or benign tertian malaria), malariae malaria (instead of quartan malaria) and ovale malaria.

may occur in this country, starting from relapsing cases acquired abroad. The United States Public Health Service recognizes this possibility, is already cooperating with certain states in intensive anti-mosquito programs and is prepared to act vigorously if epidemics occur. Physicians can cooperate in avoiding such occurrences by the early diagnosis and reporting of cases, by adequate treatment and by preventing access of mosquitoes to infected patients. Attention is directed to Circular Letter 153 from the Office of the Surgeon General of the Army, dealing with the treatment of malaria. It was published in THE JOURNAL September 25, pages 205-208.

Individuals without clinical malaria but in whose blood malarial parasites are found should be treated immediately or kept under careful observation.

### DYSENTERY

Bacillary dysentery is usually an acute disease but may become chronic or give rise to carriers. Although the use of sulfonamide drugs will undoubtedly diminish the probability of chronic or carrier conditions, a history of the disease in military personnel should lead the physician to keep it in mind. The cause of chronic diarrhea or any vague abdominal symptoms should be investigated bacteriologically. Transient or chronic carriers of dysentery bacilli are usually present among the contacts of cases. Cultures should be taken from cases and contracts, preferably by the rectal swab technic, and persons found positive should receive sulfonamide treatment in order to avoid the development of active symptoms or further spread of the infection.

Amebic dysentery, or amebiasis, is much more likely than bacillary dysentery to become chronic or to recur in acute or subacute episodes. It may result in liver abscess even without previous noticeable symptoms. Possibly strains of Endamoeba histolytica from the tropics are more pathogenic than those from temperate zones. The incubation period may be very long, or infections acquired in the tropics may produce no symptoms in the initial patient but may be responsible for family or community epidemics under conditions of bad santitation or contamination of water supplies. Clinically amebasis should be suspected in any person returned from the tropics who complains of blood in the stools, alternating diarrhea and constipation or vague abdominal symptoms. Diagnosis, however, must be made by a technician competent to differentiate Endamoeba histolytica from the other intestinal protozoa and from body cells.

### FILARIASIS

Filariasis, caused by Wuchereria bancrofti, the lymphatic filarial worm of man, is prevalent in many parts of the tropics, particularly in certain islands of the Southwest Pacific. It is transmitted by a number of species of mosquitoes, the most important of which are probably Culex quinquefasciatus and Culex pipiens, the common night biting mosquitoes of both hemispheres. The incubation period of the disease is usually six months or longer, and its first manifestation is acute lymphangitis or lymphadenitis before the worms become mature and before the larvae appear in the blood. It is not known whether the lymphangitis is caused by the worms themselves or by a secondary hemolytic streptococcus infection. There is no specific treatment for the worm, but sulfonamides sometimes relieve the lymphangitis, at least temporarily.

Cases of this infection have been acquired by military personnel. In the absence of an effective chemotherapeutic agent infected individuals may discharged from military service and have subsequent attacks of lymphangitis. Or microfilariae may be found in the blood after several months or years even without the ultimate development of elephantiasis or other obstructive manifestations. Other infected individuals may be discharged from military service during the incubation period and come under civilian medical care during their first attack of lymphangitis. The possibility of the establishment of endemic foci in this country must be kept in mind, but this is improbable because a high local incidence of infection and many mosquitoes are necessary for this to occur. The only endemic area in the United States, that around Charleston, S. C., has apparently disappeared with the improvement in mosquito control.

### OTHER DISEASES

The other diseases which may possibly be brought into the continental United States by returning military personnel are visceral and cutaneous leishmaniasis, schistosomiasis, the filarial worms Loa loa and Onchocerca, African trypanosomiasis, leprosy, relapsing fever and various

fungous diseases of the skin. The probability that new endemic areas of any of these diseases will become established in the United States is very slight. They should, however, be recognized clinically and etiologically by the medical profession.

RECOMMENDATIONS

It is recommended that physicians and health departments prepare themselves for the diagnosis, treatment and control of disease brought back by returning military personnel. Physicians can cooperate by providing themselves with a modern textbook on tropical medicine, by keeping these diseases in mind and by reporting them to public health authorities as soon as a diagnosis is made. State and local medical societies can aid by devoting programs to this field. Health departments can cooperate by obtaining special instruction in tropical medicine and parasitology for their laboratory personnel and epidemiologists, and by keeping local practitioners informed of new developments or hazards.

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## MAJOR GEN. JOHN M. WILLIS TRANSFERRED

Major Gen. John M. Willis, who has been commanding officer at Camp Grant, Ill., since October 1941, has been transferred to command all medical and hospital services of the army throughout the Ninth Service Command, comprising the states of California, Nevada, Utah, Oregon, Washington, Idaho, Arizona and Montana. Because of the presence in that wide area of certain huge army medical establishments, the new assignment is considered to be of unusual importance. With headquarters at Fort Douglas, Utah, General Willis will have direct supervision of such institutions as Fitzsimmons General Hospital, Denver, and the Letterman General Hospital, San Francisco. General Willis graduated from George Washington University School of Medicine, Washington, D. C., in 1909 and has been a medical officer of the regular army since 1911.

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## TUBERCULOSIS SURVEY

The bureau of Medicine and Surgery, Washington, D. C., announced on November 29 that the Navy has now adopted a new rapid and reliable method of giving x-ray examinations to all recruits for the purpose or discovering and weeding out those with tuberculosis symptoms. Under the new system of photofluorographs using 35 mm. motion picture film an average of 240 pictures an hour can be made at a cost of 1 cent per person. When a tuberculosis condition is suspected, the person is recalled for further diagnostic examination, including a standard 14 by 17 inch x-ray film. This new method of screening persons permits speedy examinations with a low rate of error. As many as 3,200 cases have been done in one day and 41,989 examinations a month.

As a result of the facts demonstrated by this survey, as well as the Navy's general experience with the 35 mm. fluorograph for chest films, it is felt that this system is inexpensive, reliable, and accurate for the purpose of mass tuberculosis checks. Use of the miniature negatives reduces the necessary filing space for health records to a hundred and twenty-fifth that required under old methods, it lessens the chance that tuberculosis will spread within the naval service, it provides a proved method by which similiar inexpensive preventive surveys can be made among the civilian population and it gives patients with tuberculosis a chance to overcome the disease by discovering its presence in the early stages. Work is still needed to perfect the photofluorographic process so that the size of the image will be increased without increasing the size of the film frame.

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## LIEUT. ROY F. DENT JR. AWARDED LEGION OF MERIT

Lieut. Roy F. Dent Jr. was awarded the Legion of Merit for "exceptionally meritorious conduct in the performance of outstanding services in North Africa during the period Dec. 26, 1942 to May 7, 1943. In addition to performing his normal assigned duties in a superior manner, Lieutenant Dent assembled and installed all of the x-ray equipment in his hospital and adapted this equipment to operate on electric current available locally. Later he adapted, adjusted and corrected the installation of all equipment within the Mediterranean base section. Thus he made possible the use of valuable and much needed equipment which otherwise would have remained idle. Also Lieutenant Dent by his ingenuity and technical skill improvised helpful mechanical equipment and kept in repair and operation many

items of electrical equipment which have been of material assistance in the operation of the hospital. By his resourcefulness, technical knowledge and untiring efforts he has greatly facilitated and expedited treatment and recovery of the sick and wounded." Dr. Dent graduated from Northwestern University School of Medicine, Chicago, in 1942 and entered the service in March 1942.

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## SURGEON GENERAL KIRK ISSUES STATEMENT ON PENICILLIN

Because of numerous requests received by the army for penicillin, Surg. Gen. Norman T. Kirk of the Army Medical Department explained on November 23 that the War Department "at no time has either controlled penicillin or received the entire output." The army's position with regard to penicillin supply is exactly the same as that of the Navy, U. S. Public Health Service and the Office of Scientific Research and Development, each of which receives a monthly allocation of penicillin from the War Production Board. General Kirk also explained that the penicillin allocated to the Army Medical Department is intended for the treatment of military personnel and "none of it can be reallocated or released to civilians." This month, according to the War Production Board, the Army will receive 56 per cent of the total supply, the Navy 18 per cent, the U. S. Public Health Service (for the treatment of Coast Guard and Merchant Marine personnel) 2 per cent, the Office of Scientific Research (for civilians) approximately 15 per cent, and the scientific staffs of drug companies the remainder for their own research. Though production of the drug is steadily increasing, at present none of the agencies, including the military, receive as much as they need. Its distribution among military and naval personnel is determined by the army, navy and the public health service. Distribution of the part allocated to civilians is for clinical research and its assignment is determined by a committee headed by Dr. Chester S. Keefer, Evans Memorial Hospital, Boston. Since the amount of penicillin requested by civilians greatly exceeds the available supply, it has been determined by the Office of Scientific Research and Development that requests by civilians must be made through their doctors, who should communicate with Dr. Keefer by telephone, telegram or personal letter, giving complete details of the case so that he may have an adequate basis for his decision.

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## AVIATION MEDICAL EXAMINERS

Graduation exercises were held on October 27 for aviation medical examiners following the course on aviation medicine, which is now given in its entirety at the School of Aviation Medicine, Randolph Field, Texas. This is the first class to complete this changed program, which began on August 26. The list of students graduating from Illinois are:

Maurice Blinski, 1st Lieut., Chicago.
Clarence H. Boswell, Lieut. Col., Rockford.
Charles G. Freundlich, 1st Lieut., Chicago.
Carl N. Graf, Captain, Chicago.
Mervin W. Greenberg, 1st Lieut., Chicago.
Alexander J. Jones, Captain, Springfield.
Francis H. Ketterer, Major, Breese.
Robert J. McKeever, 1st Lieut., Chicago.
Arnold H. Maloney Jr., 1st Lieut., Stockton.
John R. Peffer, 1st Lieut., Chicago.
Carl M. Pohl Jr., 1st Lieut., Chicago.
Lewis R. Pummer, 1st Lieut., Chicago.
Morton H. Rose, 1st Lieut., Chicago.
Michael Schubert, 1st Lieut., Toluca.
William F. Siefert, Captain, Rockford.
Burton J. Soboroff, 1st Lieut., Chicago.
Roger A. VanAtta, 1st Lieut., Chicago.
Robert E. Williams, Major, Chicago.

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On the eve of the Civil War a doctor, Benjamin Morgan Palmer, privately pledged his allegiance to his country. This was spoken in 1860, but the eloquence of his expression remains and today again, as we face a new danger, we may pause to repeat this doctor's love for America and share, more than eighty years later, his faith in and his love for our native land.

"Whatever be the fortunes of America, I accept them for my own. Born upon her soil of a father thus born before me, from an ancestry that occupied it while yet it was a part of England's possessions, she is in every sense my mother. I shall die upon her bosom. She shall know no peril but it is my peril, no conflict but it is my conflict, and no abyss of ruin into which I shall not share her fall. May the Lord God cover her head in her day of battle." — *Journal of the Tennessee State Medical Association.*

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Plans must be made for the future tuberculosis service men and civilian war workers. The expansion of facilities for training and placement of tuberculous workers is necessary. The establishment of workshops for industrial convalescence and perhaps colonies for the chronic patient is called for. — *Louis E. Siltzbach, M.D. The Millbank Quarterly, Jan.* 1943.

# Original Articles

## POSTOPERATIVE PULMONARY EMBOLISM

### STATISTICAL ANALYSIS OF CASES OCCURRING DURING 1940 IN ST. ANTHONY'S HOSPITAL, CHICAGO

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This report is submitted because it is believed to represent the experience of the average American non-teaching general hospital composed of average doctors, residents, internes, nurses and equipment. Because the patients were largely non-English speaking, foreign-born people, there was a high percentage of serious diseases seen on admission, as shown by the fact that 9% of all appendixes removed were perforated at the time of operation (table 1).

The number of general surgical and gynecological operations performed in the hospital during the year 1940 was 3,295, of which 1,295 cases were major operations and 2,000 cases were minor operations. A study of the records disclosed 11 cases of postoperative pulmonary embolism, all of which complicated major surgery. This is an incidence of one pulmonary embolism in 300 (0.3%) in the total number of surgical cases; none in minor surgery; and one case in 105 (1%) in major surgical operations. There were six deaths in the 11 cases, a mortality of 54.5%. Two patients obviously died from other causes: one from generalized peritonitis and carcinomatosis, and the other from uncontrolled postoperative hemorrhage, uremia, and septicemia. Thus, the corrected mortality is four deaths in eleven cases (36.5%).

The age of the patient varied from 19 to 62 years, the average being 46.27. About one-half of the patients (five cases) were 55 or over.

There were four males and seven females.

The stay in the hospital varied from 11 to 71 days, the average being 25 days. In most cases pulmonary embolism was the only cause for lengthened hospitalization. The average stay for surgical cases, in general, was 10.25 days.

The time of onset of the embolism varied from the first to the twentieth day postoperative; 6 cases (54.6%) occurred on the eleventh or twelfth postoperative day.

The type of operation, after which pulmonary embolism occurred, concerned the region of the body in or near the pelvis in every case: there were three hysterectomies, two unclassified pelvic operations on females (one a dilation of the cervex and exploration of the uterine cavity, perineorrhaphy, removal of a foreign body (pessary) through the fundus uteri, and a uterine suspension; and the other the removal of a carcinomatous left ovary, both tubes and appendix in the presence of a generalized peritonitis and a general peritoneal carcinomatosis); one transurethral prostatectomy, followed by massive uncontrolled hemorrhage and severe sepsis; four cases of suppurative appendicitis; and one inguinal herniotomy, followed by a femoral thrombophlebitis.

There was evidence of infection present in 9 of the 11 cases, as shown by the postoperative diagnosis, visible pus during the postoperative period, infective thrombophlebitis, or a markedly elevated pulse and temperature over a period of days.

The incidence and mortality according to the type of operation is shown in table 1.

TABLE 1

| Type of Case | No. of cases | % of total | Pulmonary Embolism Incidence No. | Incidence % | Mortality No. | Mortality % |
|---|---|---|---|---|---|---|
| All Pulmonary Embolism .. | 11 | 100 | 11 | 100 | 6 | 54.5 |
| Total Surgical ..... | 3295 | 100 | 11 | 0.3 | 6 | 0.18 |
| Major surgical ..... | 1295 | 39.3 | 11 | 0.85 | 6 | 0.46 |
| Minor surgical ..... | 2000 | 60.7 | 0 | 0 | 0 | 0 |
| Pelvic Operations ..... | | | 6 | | 3 | |
| Hysterectomies ..... | 55 | 100 | 3 | 5.45 | 1 | 1.8 |
| Subtotal ..... | 52 | 94.5 | 0 | 0 | 0 | 0 |
| Total ..... | 3 | 5.5 | 3 | 100 | 1 | 33.3 |
| Other female pelvic .... | | | 2 | | 2 | |
| Prostatectomies ..... | 9 | 100 | 1 | 11 | 1 | 11 |
| Suprapubic ..... | 5 | 55.6 | 0 | 0 | 0 | 0 |
| Transurethral ..... | 4 | 44.4 | 1 | 25 | 1 | 25 |
| Total Appendectomies ..... | 692 | 100 | 4 | 0.57 | 1 | 0.15 |
| Nonsuppurative ..... | 630 | 91.1 | 0 | 0 | 0 | 0 |
| Suppurative ..... | 62 | 8.9 | 4 | 6.67 | 1 | 1.61 |
| Herniotomies, inguinal .... | 60 | 100 | 1 | 1.6 | 1 | 1.6 |
| Herniotomies, femoral .... | 6 | 100 | 0 | 0 | 0 | 0 |

*Percentage occurrence per type:* There were 62 cases of suppurative appendicitis in 1940, with four emboli (1 case in 15 or 6.67%); one died and three recovered; mortality 1.61%. There were 692 appendixes removed during the year, including suppurative, giving an incidence of one pulmonary embolism in 173 appendectomies (0.57%) and a mortality of one in 692 (0.14%).

There were 55 hysterectomies in 1940. Three were total hysterectomies with three pulmonary embolisms, an incidence of 100%, and one death, a mortality of 33.3%. There were 52 subtotal hysterectomies with no pulmonary embolism. For all hysterectomies, there was an incidence of 1 in 18 (5.5%) and a mortality of 1 in 55 (1.8%).

There were 9 prostatectomies, five of them suprapubic, with no pulmonary embolism, and four transurethral with one fatal embolism, giving an incidence and a mortality for the latter of one in four (25%).

There were 66 inguinal and femoral herniotomies (other varieties were not included) of which six were femoral with no embolism and sixty were inguinal with one embolism, which was fatal. The incidence and mortality for the entire group was one in sixty-six (1.5%); for inguinal hernias, alone, it was one in sixty (1.6%).

*Pre-disposing factors or premonitory symptoms,* in order of frequency:

1. Prolonged postoperative elevated temperature, pulse, or respiratory rate or a late or secondary occurrence of the same occurred in 9 of the 11 cases (82%).

2. Suppuration within the abdomen or pelvis occurred in 8 cases (73%).

3. Femoral, pelvic or mesenteric latent, or manifest thrombophlebitis or phlebothrombosis was present in 8 cases (73%).

4. Pelvic operations comprised 6 cases (54.5%). It is noteworthy that out of 3295 surgical cases, all 11 pulmonary embolisms occurred after operations on the lower abdomen or pelvis.

*Exciting cause:* A sudden movement, not necessarily the first, such as, a bowel movement, sitting up in bed, getting out of bed, walking, etc., occurred in 8 cases (73%).

*Onset:* The onset was always sudden, accompanied by shock.

*Symptoms and signs:*

1. Shock (all 11 cases).

2. Dyspnea: rapid, difficult or painful respiration (10 cases).

3. Pulse changes: weak pulse (7 cases), rapid pulse (5 cases). (Parenthetically, one should infer from the term "weak pulse" that a fall in blood pressure has occurred.)

4. Color changes: cyanosis of the nails and lips or of the body, generally (5 cases), pallor (4 cases).

5. Fever (6 cases).

6. Pain in the chest after a movement of the body (4 cases).

7. Syncope (3 cases).

8. Cold, clammy sweat; cough, and later, sometimes, hemoptysis; rales or friction rub in chest (but not necessarily in heart region); positive haziness to x-ray, leucocytosis; drop in blood pressure.

*Diagnosis:* Positive diagnosis is often impossible, at least, before some time has elapsed. In this group, 5 were diagnosed as pulmonary embolism, one each as cerebral embolism, diabetic coma, pleurisy, coronary thrombosis, septicemia, and one was an incidental finding at autopsy. One must differentiate heart disease, such as, coronary thrombosis or spasm, coronary failure or myocardial infarct, acute cardiac dilatation,

and right heart failure; lung diseases, such as, pleurisy and pneumonia; cerebral vascular accidents, such as, embolism, thrombosis, hemorrhage, and arteriosclerotic encephalopathy; peripheral vascular collapse; and concealed hemorrhage.

The description of a typical case based on the data in this series follows: A man or woman, likely to be 55 or over, having an operation upon the lower abdomen or pelvis for the relief of a condition which has already caused, or is prone to cause, an infective thrombophlebitis, who fails to recover rapidly, maintaining an elevated pulse, temperature, or leucocyte count, or has vomiting or pain persisting more than a few days and, who upon making a sudden movement or walking about, gets a sudden pain in the chest, or, if no pain, in every case, is suddenly attacked with severe shock (rapid, weak pulse; drop in blood pressure; rapid difficult breathing; sharp rise in temperature and leucocyte count, has a cyanosis showing through a pallor; a cold, clammy sweat; unconsciousness, even death), with, later, partial recovery from shock and a persistence of all symptoms — such a person probably has a pulmonary embolism.

*Course:* There were two main types in this series: first, sudden death within a few minutes of the onset (3 cases) or, later, within one day (2 cases) or, second, a prolonged course leading to recovery in five cases out of six.

*Prognosis:* In this group 6 patients (55%) died, 5 (45%) recovered. Of the fatal cases, three patients died within one hour after onset, one in 3¼ hours, one in one day, and one died of other causes after 22 days. Fifty percent of those dying, died within one hour; and, if a patient survived longer than one hour, he had 5 chances out of 8 (62.5%) of recovering. Contributory causes of death were nearly always present and predominated in 18% (2 cases).

*Complications:* Infarction occurred in four patients (44.5%), three of whom died, giving a mortality of 75% when infarction occurred. Infection of the infarct and abscess formation, empyema, pulmonary hemorrhage, or pneumonia may occur as a complication of the embolism — none did in this group.

*Treatment:* In this series there was no evidence of any prophylactic treatment in any case and there was no uniformity in treatment of the attack. Morphine or codeine was given in 7 cases, oxygen in 6 cases, coramine in 6 cases, caffeine in 4 cases, digitalis in 4 cases, atropine in 2 cases, intravenous fluids in 2 cases, adrenaline in 2 cases, liniments in 2 cases, and, in 1 case each, adrenal cortex, short wave diathermy, artificial rspiration, or Fowler's position.

The treatments recommended by recent writers may be briefly summarized as follows:

Before the onset of the embolism, de Takats[1] suggests, as prophylactic treatment, the prevention of hemoconcentration by restoration of fluid balance and blood proteins, the prevention of slowing of venous return by maintaining arterial pressure (adrenal cortex), encouraging ventilation with sedation, relieving intestinal atony with prostigmine or acetylcholine, avoidance of tight dressings, moderate Trendelenburg position for 48 hours, and early active muscular movement (in the absence of thrombosis).

For the early treatment of postoperative thrombosis de Takats recommends that one should elevate the foot of the bed six to eight inches; foment the limb from the toes to the groin with warm, wet dressings; in pale, cold limbs, block the lumbar sympathetics with procaine; restrict liquids to 1000 cc. per day and give a salt poor diet; give intravenous heparin for ten days to two weeks sufficient to lengthen the clotting time to three times normal; give x-ray treatments for marked periphlebitic reactions with high temperature, leucocytosis, and inflammatory edema.

After the onset of embolism, de Takats[2] recommends oxygen by nasal catheter or B. L. B. mask (given by the nurse); atropine 1/60 to 1/75 grain, subcutaneously (by the nurse); papaverine ½ grain, intravenously, and atropine 1/75 grain, intravenously, if no marked dilation of the pupil or flushing is present, administered by the interne. Repeat the above every four hours until the patient's condition is improved. Avoid morphine, digitalis, and adrenaline. Ligation of the femoral vein proximal to the clot and below the profunda or below the saphenous, or even extraction of the clot through an opening in the saphenous (or even tying the common iliac), may be considered in case of thrombosis of these veins[3]. Cartier[4] suggests 1 cc. of adrenaline solution or 5 cc. of coramine, subcutaneously, continued two or three minutes later, if

## PULMONARY EMBOLISM
### RECOGNITION

Sudden onset of severe shock with rapid, weak pulse, restlessness, difficult breathing, rapid breathing, sweating and pallor, pain in chest, fainting, collapse or unconsciousness. Apt to be in a patient over middle age, who has phlebitis, or is convalescing from an operation or delivery.

### EMERGENCY TREATMENT

**BY NURSE**

1. Put in semi-sitting position.
2. Start **oxygen** by catheter or mask immediately.
3. Give **1-75 grain atropine sulphate**, hypodermically, immediately.
4. Call interne.

**BY INTERNE**

1. Give a second dose of **1-60** to **1-75 grain atropine sulphate** intravenously (if previous injection of atrophine has not caused flushing of face and dilation of pupil).
2. In any case give **½ grain papaverine hydrochloride** intravenously.
3. Call attending physician as soon as emergent duties are performed.
4. Repeat **atropine** and **papaverine** (about same until certain of improvement, then three or four times a day).

### LATER MANAGEMENT

1. Take blood pressure hourly.
2. Take temperature, pulse and respirations hourly.
3. Take white blood count as soon as patient's condition permits.
4. Take history and make physical examination of the chest with careful recording.
5. X-Ray of chest (bedside) and electrocardiograph (bedside).
6. Consider Heparin intravenously and surgical treatment at site of origin, such as saphenous ligation, etc.

**NOTE:**

**Morphine**, **adrenalin** or **digitalis** to be used with caution.

Above treatment is not harmful in cerebal embolism or coronary artery disease.

necessary. Patel[5] advises massive subcutaneous or intravenous injections of atropine sulphate, 1/60, 1/30, or 1/20 grain; morphine hydrochloride, 5/6, 2, 2½ or even 3 grains; or papaverine in the same dosage; intracardiac adrenaline; venesection plus simultaneous ouabain intravenously, in doses of 1/120, 1/60 or 1/30 grain; or injection of the stellate ganglion, unilateral or bilateral, with 1% novocaine. de Takats[6] has presented excellent clinical and experimental evidence against the use of morphine, adrenaline, digitalis and venesection. Nygaard[7] states that the Trendelenburg operation is futile because of the time element and the high associated mortality.


#### SUMMARY

An analysis of 11 cases of postoperative pulmonary embolism occurring in an average American general hospital during 1940 is presented.

A composite picture is drawn of a typical case.

A brief review of the treatments suggested by recent writers is added.


#### CONCLUSIONS

1. Infection is a dominant factor in the causation of postoperative pulmonary embolism.

2. All of the 11 cases here reported followed operation upon the lower abdomen or pelvis.

3. Most patients surviving more than one day will recover.

4. A great need exists for an organized plan for the recognition and treatment of postoperative pulmonary embolism.

9 S. Kedzie Ave.

#### ADDENDUM

Following this study a definite program was adopted by the surgical committee and approved by the staff. Cards (see insert) were printed, framed, and hung in every chart room and interne's room. Such a card is reproduced here with the thought that it may be of value to hospitals not having a definite program for the treatment of the emergency phase of pulmonary embolism.

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Although the tuberculosis hazard in industry, to the young and especially to young women, is recognized by voluntary and official health agencies and by many others concerned, it is not at all appreciated by young women. Actually, girls going into industry tend to believe that they acquire ruggedness by virtue of donning pants and getting their faces dirty. This attitude calls for sound and far-reaching instructions as to diet, rest, the danger of time-and-a-half and double time. It calls, too, for properly managed plant cafeteries and proper plant ventilation, for good public health nursing in the industrial community, for sound medical advice. In fact, it demands all those measures included in a good industrial hygiene program, including careful preplacement examinations and periodic X-ray surveys.—*Ed., Amer. Jour. Public Health, July,* 1943.

# MALINGERING IN NURSES WITH HYSTERIA

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Medical literature is peculiarly lacking in discussions of the emotional problems of nurses. In a review by LeMar listing[1] 1,411 case reports of illness from five training schools for nurses, no mention was made of psychological conditions. However, 46 were entered as undiagnosed. From this statistical point of view it might appear that nurses have few emotional difficulties. That this is not so, is well known by those persons engaged in the management of the health problems of nurses. In a report of four cases of prolonged unexplained fever, Schnur[2] stated that the nurses produced the "fevers" by tampering with the thermometers. He considered this simply as malingering without further explanation. The paucity of reports of such occurrences might be explained by the fact that physicians are reluctant to write of such opprobrious conditions particularly when it concerns medically trained personnel. The physician feels somehow that such reports are unethical, and that they would reflect on the integrity of his co-workers. Such an attitude is neither scientific nor constructive. More enlightenment on this complex problem will aid in the proper diagnosis and management of such patients. In general, the emotional problems of nurses are similar to those of other women, with important modifications introduced by their social as well as professional experience and training.

According to the Psychiatric Dictionary[3] hysteria is defined "as a psychogenic disorder in which the symptoms may be motor, sensory, visceral or mental, and which results from conflict in the unconscious part of the psyche. When the mental struggle, unacceptable to the conscious mind, gains expression by physical symptoms, it is a conversion hysteria; if anxiety is prominent, it is an anxiety hysteria," and if the symptom formation becomes part of the character, we refer to it as hysterical personality. Malingering[3] is defined as "the simulation of symptoms of illness or injury with the intent to deceive." The literature contains many references to the military implications of malingering but in civilian practice malingering appears to be relatively uncommon, though the question of malingering is often raised for consideration in industrial and insurance disability cases.

In differentiating hysteria and malingering, most authors, such as Winkelman,[4] Neuhaus,[5] Charlin,[6] Stone,[7] Davidson,[8] Spaeth,[9] and others point out that in hysteria the motivation is unconscious whereas in malingering it is entirely conscious. However, this view is based upon only a superficial understanding of the observed phenomena. K. A. Menninger[10] discusses the psychology of malingering in a most illuminating article. Malingering is a neurotic reaction resulting largely from unconscious determinants. The malingerer is conscious of his contribution to the feigned illness but he has no knowledge of the dynamic factors leading to this expression of his neurotic character. The conscious element in the common neurosis is minimal, yet every neurotic has some awareness that he may partly control the display of his symptoms either by exaggeration or dramatization of them. In hysteria this awareness becomes the secondary gain which is an important feature of the neurosis. Menninger points out that "the malingerer capitalizes the secondary gain making it the predominant motive." We may then see that the difference in the conscious element in hysteria and malingering is merely a quantitative one.

What is the purpose of malingering? Most authors assume that it is for a material gain such as the easy acquisition of money, a change of occupation, or as defined in a military sense, the evasion of one's duty. This is contrasted with hysteria where the goal is sympathy or attention. Even such a distinction is not valid. There are several aspects to the motivation of malingering. In Menninger's opinion the act of malingering stems from an unconscious wish, which serves as an aggression designed to provoke punishment from another person. Malingering may be useful to the individual. In this respect it is interesting to observe that malingering is not restricted to human activity. Darwin[11] has referred to the natural use of deceit by animals where the act also has a protective function, for example, the sham death of the opossum or the feigned injury of the quail hen. Malingering represents a form of lying. Brill[12] has stated,

Read before the Illinois Psychiatric Society, May 22, 1943 From Department of Psychiatry, University of Illinois College of Medicine. This work was performed under a Rockefeller Fellowship in Psychiatry.

"Every conscious lie, even in normal persons, is a direct or indirect wish. Everything that necessitates lying must be of importance to the individual concerned. To be called a liar, a person not only must show a frequent tendency to confabulate, but also must evince a certain clumsiness or weakmindedness in its execution." This is equally true of malingering.

Since the intention of the patient is unconsciously provocative, one can see how easily this wish is gratified. At first the physician responds to the ill person with great sympathy and sincerity. As more and more measures are employed unsuccessfully in the treatment, the physician becomes uncertain of the diagnosis until finally with almost a triumphant note, he discovers the patient in the act of deception. The anger of the physician is reflected in his moral condemnation and subsequent management of the patient who has fooled him. Many articles are devoted to methods for catching the culprit by means of various tests. Time and again the patient's conduct is pointed out as reprehensible. Weir Mitchell[13] reports a very interesting account of this attitude toward malingerers in the Civil War. Hulett[14] in discussing malingering prior to our entry into the present war shows that our contemporary attitude has not *changed* from that of the Civil War physicians.

Another feature of interest is the strongly masochistic and exhibitionistic character of the malingerer. Most patients will subject themselves to injury, or to surgical procedures in which these elements are prominently displayed. It has been stated often that hysterics welcome examinations and like to discuss their symptoms whereas the opposite is true of malingerers. Yet if a malingerer remains undetected, he continues to flaunt his deception in such a way that the physician may discover it.

The usual long term hospitalization of malingerers may be explained by the "so-called organic" tradition in medicine. In essence, this implies that it is far worse to overlook an organic condition than a psychological one. In Schnur's series, for example, the patients were in the hospital from three to seven months before the correct diagnosis were made.

Since this presentation concerns itself primarily with nurses, it is proper to point out that an equal series of similar instances could have been selected from a group of physicians, dentists or other medical workers. An interesting comment is made later about why nurses may be more susceptible, psychologically. Several of these patients were admitted from other hospitals because they were difficult diagnostic problems. Through the kindness of Dr. R. W. Keeton, Head of the Department of Medicine, University of Illinois, the following cases are presented.

CASE 1: — A 26 year old unmarried nurse of Welsh ancestry was admitted to the medical ward in February 1935. Her complaints were weakness, fatigue, and a history of having had eight convulsions during the preceding two years. The physical and neurological examinations revealed no unusual findings. She remained on the ward more than two months, and was discharged with a diagnosis of hysteria or a possible epilepsy.

In December 1936 she was readmitted to the ward, having been employed during the interval at a neighboring hospital as assistant superintendent of nurses. She gave more details about her seizures stating that witnesses told her they were not epileptiform but that she seemed to lose consciousness. She stated that these spells were major in comparison to some she had had as a child when she suffered only momentry loss of consciousness. (from age 9 to 15). Her father died of tuberculosis and her mother of diabetes. As she was an only child, orphaned at 9, she lived thereafter with friends of the family. As a cause for the spells the neurological consultant suggested hypoglycemia and diagnosed hysteria on the basis of apparent homosexual conflicts. She returned for a week in February 1937 for sugar tolerance tests which proved indecisive.

In June 1937 she was readmitted and remained until November (a total of 156 days). At this time her memory of her first convulsive seizure in 1933 was related to the fact that she had not eaten for two days because she lacked money to buy food. At the time she was assistant superintendent she was on a reducing diet which contained no carbohydrates and this precipitated another attack. As on previous admissions the physical and neurological examinations revealed no abnormalities. However, on the day after admission she was observed in a typical hypoglycemic attack by the interne who reported a pulse of 48, cold skin and eyes rolled up and in. The blood sugar was 52 mg. per 100 cc. The surgical consultant examined her and diagnosed a possible pancreatic adenoma. He stated "the laboratory data proves conclusively that a hypoglycemia exists but the type of reaction is not constant. The attacks vary from definite convulsions with loss of consciousness to weakness, sweating, vertigo and mental confusion. Adenoma of the pancreas is not considered too strongly but a laparotomy is indicated." A week later the operation was performed and a normal pancreas was found.

She continued to have more hypoglycemic attacks and so more glucose and adrenalin tolerance tests were performed.

On October 5, 1937, the senior resident physician noted — "Last night a messenger came from a local drug store with a package containing insulin and a syringe for the patient. This had happened once before but the patient denied any responsibility. However, the gynecological ward nearby had reported that insulin was mysteriously missing."

Two weeks later a needle, syringe, insulin and a box of barbiturates were found among her possessions. At this discovery she became apprehensive and guilty. She was placed on the psychiatric closed ward, where blood sugar studies revealed a normal glucose tolerance curve. She was discharged upon her own request. A diagnosis of hysteria and malingering was made. The patient refused further psychiatric management. Soon after discharge it was learned later that she had registered in another hospital and repeated the malingering cycle again by invoking the sympathy of the internist.

CASE 2: — A 22 year old, single, Irish Catholic nurse was admitted December 1938 and remained for a month. Her complaints were nervousness, heart consciousness, 30 pounds weight loss in several months, dyspnea on exertion, excessive perspiration and insomnia. Seven months before, while still a student nurse, she had become very nervous and emotionally unstable. She weighed 165 pounds but despite an enormous appetite she lost weight. She gave a history of having had a period of amenorrhea for ten months in the previous year. On admission her pulse was 140 and on neurological examination she showed a hyperreflexia. Two basal metabolic rates were plus 153 and plus 143. She refused to eat, could not sleep and threatened suicide.

During routine ward rounds she was discovered to be taking 8 to 10 small tablets a day. These were assayed and were found to be ½ grain tablets of desiccated thyroid. Confronted with the facts by the resident physician, she admitted having taken one hundred tablets at once in September and having consumed in the intervening two months an additional two hundred tablets.

The diagnosis was hysteria with marked suicidal trends. The acute episode had begun as a reaction to a head nurse who reminded the patient of her mother with whom she had a strong conflict.

Following the cessation of thyroid, she recovered quickly from its effects and on discharge 12 days later, her pulse was 64.

CASE 3. — A 22 year old graduate nurse of Bohemian parentage was admitted in May 1939 with complaints of dizziness, somnolence, incordination, nausea, vomiting and diplopia. She remained on the medical ward for a week, improved spontaneously without treatment and was released without a definite diagnosis.

In December 1939 she was readmitted with a history of having been symptom-free until several days before admission. Again she was dizzy, sleepy, and while on duty, was unable to unlock doors or cabinets and fumbled with the medications. Against her will she was brought into the hospital where she exhibited diplopia, nystagmus and thick speech. She also complained of backache and headache and an irritability which she could not control. The neurological consultant suggested encephalitis, multiple sclerosis or a tumor. The chief of the neurological service examined the patient and recognized correctly that the symptoms were the toxic effects of overdose of sedatives.

A diagnosis of hysteria was made and the patient confirmed having taken large doses of phenobarbital on both occasions. She appeared for several psychiatric interviews under moral pressure applied by a roommate but remained uncooperative toward further therapy.

CASE 4. — An unmarried, 24 year old, Italian nurse was admitted in Ocober 1940 with a complaint of vaginal bleeding. Her difficulty with menstrual dysfunction began while she was still a student nurse. At that time she had been having menorrhagia but was extremely modest and could not discuss her condition with the physician. She fainted on the ward and on routine examination was found to have a low blood count. She was operated May 1935 and her appendix and a cystic left ovary were removed. In 1936 a uterine suspension was performed to stop the bleeding. In 1937 the left tube was removed as were polyps from the bladder. In December 1938 she complained of severe abdominal pains and a supracervical hysterectomy was performed. In June 1939 she vomited for three days and reported blood in her emesis, and occasional blood in her urine and stool. She also reported bleeding from the cervical uterine stump. She was considered a possible blood dyscrasia and at her own request, was admitted for removal of the cervical stump or radiation of the remaining ovary.

After intensive examination the hematologist reported that the condition might classify clinically as a secondary purpura of unknown etiology.

Soon after admission she began to complain severely of abdominal cramps and although the evidence was not clear cut, a tentative diagnosis of partial intestinal obstruction was made, and a laparotomy performed through an old scar. No obstruction was found. Postoperatively, she had a low grade fever but this was discovered to be due to her rubbing the thermometer on the bedclothes. A syringe and needle were found in her possession but the purpose of these was not determined.

To see if she really had vaginal bleeding, the resident physician and a nurse examined her menstrual pad frequently. On one occasion this patient requested from a neighboring patient who was menstruating whether she might borrow a stained pad to show the doctor that she was bleeding. She was diagnosed hysteria and a victim of polysurgery which had contributed definite organic pathology.

CASE 5. — This 40 year old, married, graduate nurse of American-German ancestry was admitted in

April 1941. Prior to admission she had been a nurse at another hospital where she had been hospitalized for ten weeks for prolonged unexplained fever.

She complained of repeated vomiting, bitemporal headaches, blurred vision, diplopia, diarrhea, nocturia and other complaints. During her stay of sixty days on the ward, the examinations revealed no other abnormalities than diarrhea and fever, for which the medication, emetine for the diarrhea, and sulfathiazole for the fever, was ineffective.

Her daily temperature continued between 101 and 102 degrees. She was permitted by the nurses who recorded temperatures, to take her own and report it.

In June an alert nurse discovered that the patient owned two thermometers which she used because of "esthetic" reasons. One registered 102 degrees in comparison with a ward thermometer which read 98 degrees when tested at the same time. When confronted by the resident, she denied the allegations. At her request the patient was dischargd; the diagnosis was hysteria with malingering.

COMMENT

No special interest derives from the hysterical aspects of the cases presented. The internists and other examiners agreed that the patients were obviously hysterical. In these cases the malingering appeared to be superimposed upon the hysteria as an unusual manifestation. Due to this experience the chief of the medical service stated "he could see no other course but to suspect every nurse admitted for medical management as an individual attempting to put something over on the doctors."

Malingering, Glueck[15] agrees, is a special form of lying which depends on unconscious motives. As a form of mental reaction it is manifested for the purpose of evading a particularly difficult situation in life. It was possible to demonstrate that in each of these patients, this behavior correlated with their adjustment to life. The one married nurse was extremely unhappy with her husband whom she had to support. The others had been unable to make any satisfactory type of heterosexual adjustment. According to information given by a classmate, the patient with the supposed blood dyscrasia was considered a confabulator by her class. She invented a story of being engaged and went so far as to purchase a diamond engagement ring which she wore as a proof. One classmate, more curious than the others, had discovered that this patient was also having bouquets delivered to her at the hospital supposedly from her fiance. Her family had expended much money and concern on her various illnesses. This last patient and the patient who was operated upon for a pancreatic adenoma are examples of the extent to which malingerers go.

The medical training of these individuals demonstrates two points. They had used their knowledge of the actions of the various medications in the malingering. Laymen who malinger, however, are usually able to learn some technique to continue their symptoms but lack the adeptness and facility of a trained person. In addition one may emphasize that such neurotic nurses are apt to employ drugs at the slightest provocation. Certainly from this beginning it is easy to understand how nurses become involved in drug addiction. The second point was mentioned by the chief of the medical service. Since these patients were medical personnel, they were given more than the usual consideration. The denouement on discovery of their deception was consequently greater. It was as though the doctor felt doubly betrayed. Concerning this Menninger pointed out, "Any physician who becomes angry at a malingerer should ask himself, if, perhaps, that was not precisely what the patient unconsciously desired. There is just as little justification for taking a moralistic attitude toward this type of patient as there would be toward the sinfulness of a patient whom one is treating for syphilis." It is necessary to emphasize again what may appear to be obvious. That is it is important that the diagnostician should recognize malingering as early as possible, in order to minimize the unnecessary medical work (up) which is wasted on such a patient. The patient may then be directed to psychiatric management. In connection with this point malingering in the military service is a court martial offense punishable by death. In the last war many of these unfortunate victims of their own personality problems were rescued through better psychiatric understanding.

Malingering is characterized by a very conscious intent to deceive but the entity must be considered as belonging to the group called neurotic character (also called psychopathic personality), when it is a very prominent feature. Otherwise it may represent a manisfestation of an hysterical personality.

The relationship between malingering and suicide was reported by Menninger in another article. The first three patients in our series continued medication past the point of safety and

suicidal ideas were implied or admitted by these individuals. It has already been noted how malingering ideally lends itself to the expression of masochistic and exhibitionistic trends. The pain endured is out of all proportion to the gain anticipated. Although the malingerer appears conscienceless as Good[17] maintains, the malingerer unconsciously feels guilty and inflicts his own punishment.

Franz Alexander[18] pointed out the relationship of malingering to nursing. "There is one interesting psychological consideration. The nurse's psychological situation is not an easy one. A nurse has to take care of other people whether she feels well or not. Her duty is to take care of other people all the time, whether she is up to it or not. Whenever her dependent tendencies are aroused, this is greatly increased by being continuously exposed to sick people who have the right to be taken care of by others. It is somewhat similar to the situation which we occasionally experience in large families, where the oldest daughter has to take responsibility for six or seven younger children. In such cases one can often see the tremendous desire to be a small child, the envy of the older ones, and a repudiation of this imposed role of mother. Nurses are continuously exposed to a similar emotional strain. That they occasionally succumb to the temptation and wish to be sick themselves is quite intelligible. This wish to escape into sickness, together with the opportunity and a knowledge of the different symptoms, would seem to make them easier victims of malingering than many people who are not exposed constantly to this type of emotional difficulty characteristic of their profession."

In a recent article concerning Mental Hygiene Problems of Nurses, Boyd[19] suggested a new and more progressive attitude to be taken to student nurses. He emphasized the need for their proper evaluation before admission to nurse's training and suggested a psychiatric consultant for problems developing during training.

## CONCLUSIONS

1. The relationship of hysteria and malingering was discussed with the presentation of five clinical problems (of hysteria and malingering) in nurses.

2. Part of the psychological mechanism of malingering was presented. It was shown that neither motivation nor goal could be used as criteria to distinguish hysteria from malingering. It was demonstrated that the goals in these clinical instances were not for material gain.

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Proper food, good living conditions, and moderate hours of work, while not lessening infection, at least should increase the individual's resistance to tuberculosis. Finally, a thorough case-finding program, including the frequent use of tuberculin tests and carefully interpreted chest X-ray films, should be followed through to its natural conclusion by insisting upon an adequate period of treatment for all those showing evidence of disease. — *Spencer Schwartz, Am. Rev. Tbc., Jan.* '43.

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The clue of our destiny, wander where we will, lies at the cradle post. — Richter.

# THERAPEUTIC DIETS AND WAR FOOD RATIONING

H. Kenneth Scatliff, M.D.
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The point system of rationing has been adopted by our government to facilitate the equitable purchase, allotment, and distribution of food and other commodities. The points, having a variable value, present the physician with an added complication in the matter of diet direction and preparation. This complication can be kept at a minimum by some attempt to standardize procedure and agreement as to dietary requirements.

This matter is presented tentatively for your consideration and has been prepared in consultation with our dietitians, with nutritionists from the Elizabeth McCormick Memorial Fund and the Illinois Institute of Technology, and clinic dietitians from St. Luke's Hospital and

Prepared for the Ravenswood Hospital Medical Staff.

TABLE 1.—GUIDE FOR DETERMINING ALLOWANCE OF RATIONED MEATS, FATS, AND PROCESSED FRUITS AND VEGETABLES FOR THERAPEUTIC DIETS

| DIET | DIABETIC | | |
|---|---|---|---|
| CANNED FRUITS AND VEGETABLES | Servings per day | | Total canned frts. & vegs. per month (a) in pounds (b, c) |
| | 2 frts. & 3 vegs. | | 4 |
| | 3 frts. & 3 vegs. | | 8 |
| | 3 frts. & 4 vegs. | | 12 |
| MEAT (d) | Protein per day in grams | Meat per day in grams | Meat per month (a) in pounds |
| | 50 | 50 | 5 |
| | 60 | 90 | 9 |
| | 70 | 130 | 12 |
| | 80 | 170 | 16 |
| | 90 or more | 210 | 20 |
| FAT | Fat per day in grams | Rationed fat per day in grams | Rationed fat per month (a) in pounds |
| | To 60 | To 22 | To 1½ |
| | 80 | 44 | 3 |
| | 100 | 68 | 4½ |
| | 120 | 95 | 6½ |
| | 140 | 120 | 8 |
| | 160 | 145 | 9½ |
| | 180 | 170 | 11 |
| | 200 | 195 | 13 |

| DIET | REDUCTION, ANEMIA, HIGH PROTEIN | | HIGH CALORIE HIGH VITAMIN |
|---|---|---|---|
| CANNED FRUITS AND VEGETABLES | Servings per day | Total canned frts. & vegs. per month (a) in pounds (b, c) | Same as REDUCTION DIET |
| | 3 frts. & 3 vegs. | 4 | |
| | 3 frts. & 4 vegs. | 8 | |
| | 4 frts. & 4 vegs. | 12 | |

(*Table 1 — Continued on page 23*)

the Illinois Research Hospital, Chicago.

In the matter of therapeutic diets the following diets have been considered:

| | |
|---|---|
| Diabetic | High Vitamin |
| Reduction | Pregnancy |
| Anemia | Bland |
| High Protein | Ulcer |
| High Calorie | Low Residue |

Some therapeutic diets will not fall into the types of diets that have been outlined and will need to be considered individually, as, for example, kotogenic and allergy diets.

The basic daily food allowance considered for the diets named is:

1 pint milk
1 egg

Footnotes — Table 1.

a. Amounts are figured on a monthly basis to facilitate recommendations to individual rationing boards. If diets for less than 1 month are required, the figures are based on a month of 4 1/3 weeks.

b. Four servings (½ cup or 100 grams each) of fruits or vegetables are estimated in each pound.

c. For each additional serving of canned or processed fruits or vegetables per day, add 4 pounds of canned or processed fruits or vegetables per month.

d. In considering rationed meats as purchased in these diets, an allowance is made for waste and shrinkage in cooking.

| MEAT (d) | Protein per day in grams | Calories per day | Meat per day in grams | Meat per month (a) in pounds | |
|---|---|---|---|---|---|
| | 60 | 600 | 90 | 9 | |
| | 70 | 900 | 130 | 12 | Meat per month |
| | 80 | 1200 | 170 | 16 | |
| | 90 | 1500 or more | 210 | 20 | 6 pounds |
| FAT | Calories per day | Rationed fat per day in grams | Rationed fat per month (a) in pounds | | |
| | 600 | None | None | | Fat per day |
| | 900 | 10 | ½ | | 180 grams |
| | 1200 | 20 | 1½ | | Calories |
| | 1500 | 35 | 2½ | | per day |
| | | | | | 3100 plus |
| | | | | | Rationed fat per day 140 grams |
| | | | | | Rationed fat per month 9 pounds |

| DIET | PREGNANCY | BLAND, ULCER, LOW RESIDUE | |
|---|---|---|---|
| CANNED FRUITS AND VEGETABLES | | Servings per day | Total canned frts. & vegs. per month (a) in pounds (b, c) |
| | No additional servings of frts. or vegs. | 2 frts. & 2 vegs. | None |
| | | 2 frts. & 3 vegs. | 8 bland vegs. |
| | | 3 frts. & 3 vegs. | 12 bland frts. & bland vegs. |
| MEAT (d) | Protein per day 80 grams | | |
| | Meat per day 100 grams | No additional meat required | |
| | Meat per month 11 pounds | | |
| FAT | Fat per day 100 grams | | |
| | Rationed fat per day 45 grams | No additional fats required | |
| | Rationed fat per month 3 pounds | | |

3 slices bread, 90 grams

2 servings 3% vegetables, 200 grams

1 serving 6% vegetables, 100 grams

2 servings 12% fruits, 200 grams

4 ounces meat, 120 grams

This basic diet provides approximately 42 grams of fat daily. Excluding the meat items, it furnishes approximately 38 grams of protein. To the physician considering the minimal meat requirements of a man doing hard labor the amount of meat recommended may appear somewhat restricted, but it is pointed out that the allowance under the rationing program has been determined by governmental authorities.

For the basic pregnancy and bland low-residue diets, 1 quart of milk is substituted for 1 pint of milk daily *(Table 1)*.

If it is desired to determine the point value of rationed meats, fats, and processed fruits and vegetables in terms of pounds, *Table 2* may be used, bearing in mind that as the point value is changed so will the table require revision.

It has been suggested that *Table 3* may well represent the total diet requirements of patients on any of the diets discussed herein.

TABLE 2.—CALCULATIONS FOR THE POINT VALUES OF ONE POUND UNITS OF RATIONED MEATS, FATS, AND PROCESSED VEGETABLES AND FRUITS

| Amount in Pounds | Rationed Food | Point (a) Value Per Pound | Point Value for Amount Used |
|---|---|---|---|
| Canned ..... | Peas ..... | 13 | 6.5 |
| Vegetables ..... | String Beans ..... | 11 | 3.3 |
| for Bland Diets ..... | Tomatoes (strained) ..... | 13 | 2.6 |
| 1 | Pound Unit Canned Bland Vegetables = | | 12.4 (12.0) Points (b) |
| Canned ..... | Peaches ..... | 13 | 6.5 |
| Fruits for Bland Diets .... | Pears ..... | 11 | 5.5 |
| 1 | Pound Unit Canned Bland Fruits = | | 12.0 Points (b) |
| Canned ..... | Peas ..... | 13 | 2.6 |
| Vegetables ..... | String Beans ..... | 11 | 3.3 |
| For All Other Diets ..... | Tomatoes ..... | 13 | 6.5 |
| 1 | Pound Unit Canned Vegetables = | | 12.4 (12.5) Points |
| Canned ..... | Peaches ..... | 13 | 2.6 |
| Fruits for ..... | Pears ..... | 11 | 2.2 |
| All Other ..... | Apricots ..... | 13 | 2.6 |
| Diets ..... | Red Cherries ..... | 11 | 3.3 |
| | Pineapple ..... | 15 | 1.5 |
| 1 | Pound Unit Canned Fruits = | | 12.2 (12.0) Points |
| Meat and ..... | Beef, Rib, 7" cut ..... | 8 | .8 |
| Cheese for ..... | Beef, Chuck, Bone in ..... | 7 | 1.4 |
| All Diets ..... | Beef, Round ..... | 9 | 1.8 |
| | Beef Liver ..... | 6 | .6 |
| | Lamb, Loin Chops ..... | 8 | .8 |
| | Pork, Center Chops ..... | 9 | .9 |
| | Veal, Round Steak Cutlets ..... | 9 | .9 |
| | American Cheese ..... | 8 | .8 |
| 1 | Pound Unit Meat and Cheese = | | 8.0 (8.0) Points |

a. Point values as of April 1943 except those for meats, which have been corrected to May 2, 1943.

b. When puréed bland vegetables and fruits are prescribed, divide extra points by 2.

TABLE 3.—MAXIMUM TOTAL MONTHLY ALLOWANCES OF RATIONED FOODS FOR SPECIAL DIETS*

| Diet | Rationed Processed Fruits and Vegetables (Pounds) | Rationed Meats (Pounds) | Rationed Fats (Pounds) |
|---|---|---|---|
| Diabetic | 12 | 20 | 13 |
| Reduction | 8 | 20 | 2½ |
| High Protein | 8 | 20 | 3 |
| Bland Ulcer, Low Residue | 12 | Normal | Normal |
| High Calorie, High Vitamin | 8 | 6 | 9 |
| Pregnancy | 4 | 11 | 3 |

*Since these are total monthly allowances, subtract the present allowance per person to determine the extra pounds for which stamps are required.

An example for ordering additional rationed foods:
Example: DIABETIC DIET

Total Requirement for a Month
8 pounds processed fruits and vegetables
12 pounds meat
8 pounds fat

8 pounds x 12 (points per pound for processed fruits and vegetables) ..... = 96 Total points per month
48 Normal allowance
—
48 Extra points in blue stamps per month

12 pounds x 8 (points per pound for meat) ..... = 96 Total points per month for meat

8 pounds x 8 (points per pound for fat) ..... = 64 Total points per month for fat
—
160
69 Normal meat and fat allowance per month
—
79 Extra points in red stamps per month

FORM OF REQUEST FOR ADDITIONAL FOOD

Date .....
To OPA Rationing Board No. .....
Subject: Special Diet, (e.g. Diabetic) type.
Length of time extra food required: .....

For: .....
(Patient's name)

.....
(Address)

This patient is under my professional care and observation. As an essential part of his/her treatment, a special diet has been prescribed. This diet is such that an additional amount of some rationed foods is required since substitution cannot be made in the condition described.

I. PROCESSED FRUITS AND VEGETABLES:

| | Special Diet Will Require Per Mo. (Extra) | Average Point Value Per Pound | Extra Points Needed Per Month |
|---|---|---|---|
| VEGETABLES | ..... | ..... | ..... |
| FRUITS | ..... | ..... | ..... |

II. MEATS AND FATS:

| | Raw Weight Needed Per Month | Average Point Value Per Pound | Total Points Per Month | Extra Points Needed Per Month |
|---|---|---|---|---|
| MEATS | ..... | ..... | ..... | ..... |
| FATS | ..... | ..... | ..... | ..... |

Yours very truly,

....., M.D.

# THE INFLUENCE OF THE DRAFT ON THE FORMATION OF PSYCHOSES IN WOMEN

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The occurrence of psychotic episodes in males, reflecting the stress of imminent or actual mobilization into military service, has been investigated by various authorities. Their critical abstracts constitute valuable help in the effort to detect and eliminate those who are unsuited for this purpose. The aim of this paper is to deal with various circumstances characterizing the outbreak of a psychosis in women, coninciident with the impact of war and draft or departure of sons, brothers and other near relatives into the armed forces. Mere psychoneurotic reactions have been ignored and only those cases exhibiting a definite psychotic picture will be presented.

Among the female admissions at the Manteno State Hospital during the year 1942, we observed several cases whose histories indicated that the onset of mental symptoms was connected with the prospective or actual draft of a near relative. The records of twelve such patients were carefully studied — all of them were definitely psychotic and not amenable to psychotherapy alone. A few showed improvement or complete recovery under the administration of shock therapy.

In the information regarding four young schizophrenic girls, the fact had been stressed that an acute exacerbation of their psychosis took place while their brothers were subject to the draft. In reality, two of these girls reacted with an acute catatonic excitement when they learned that their respective "boy friends" were married. Their brothers' draft must be regarded here only as a secondary cause. The other two

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girls manifested a continuous and progressive picture; both had had many previous hospitalizations with acutely disturbed periods.

Another patient, fifty-two years old, belligerent and subject to vivid hallucinatory episodes, and who was described as having been "queer and odd" since her fifteenth year, was reported by her relatives of having exhibited a marked peculiar behavior coincident with her son's induction into the army. In this case, however, it was considered that the menopause, established earlier in the same year, was responsible for the rapid deterioration in an old schizophrenic process.

Four cases were diagnosed as involutional psychosis. These females were between forty-five and fifty-five years of age and were passing through the menopause at the time of the outbreak of their psychosis. One of these women showed an agitated and depressed picture. Her prepsychotic history was reported normal. In October, 1941 she had a hysterectomy. In November of the same year, when her daughter announced her intention to marry, the patient cried about this fact for a long time. She said she did not care to be present at the wedding because the daughter's fiancé was subject to the draft. The marriage took place in February, 1942, but the patient continued to worry about the son-in-law and eventually also about her twenty-four year old son who had been called to military training. She feared that both men would be sent abroad. Becoming depressed and restless, she wrung her hands, grew sleepless and lost weight. She now asserted that she would never see her son again and said, "I was all right until war was declared."

It is interesting to note in this case that originally the patient worried more intensely about her son-in-law than about her own son, who in the meantime had actually entered the army. Improving under electric shock, it became possible to discuss the mental content with this patient. The exploration sharply illuminated the ambivalence toward her son-in-law, whom she regarded as an intruder and who was responsible for the fact that she lost her daughter from the family circle.

From her dream material, a similar ambivalent attitude toward the entire family could be recognized. The hysterectomy had been experienced as castration.

Another patient, fifty-five years old, who showed the typical signs of an agitated depression, accompanied by feelings of guilt and despair, developed her mental illness following the attack on Pearl Harbor and the declaration of war. She remained in bed, refused food and had to be tube-fed. She said she would die if her nephews had to enter the army, especially one nephew who had since her only child's death in infancy to a certain degree taken his place in her feelings. Upon improvement she declared, "I have always felt sad since my child died," and was unable to recall that she had particularly worried about the war.

Another patient with an involutional melancholia became disturbed and threatened to commit suicide when her son tried to enlist in the air corps. In this case, however, it was demonstrated that the origin of the mental symptoms arose many months earlier, at a time when she falsely claimed that she had cancer, and following the accidental death of her brother-in-law imagined that it was her son who was killed.

Regarding a colored women with an involutional psychosis, we received the information that she had developed her psychotic disturbance following her son's entrance into the army. It was apparent, nevertheless, that this woman had been sick for a prolonged period of time prior to this. Investigation disclosed that the patient had persistently harbored ideas of poisoning and sinfulness and that she had experienced acute visual hallucinations. She stated at the hospital that she worried not because her son was a soldier but because he was not a Christian. When he visited her, she ignored him completely. In this case, it was held that the patient's unhappy marriage with a drunkard had actually furnished the main precipitating cause for the mental breakdown.

In the case of a psychosis with mental deficiency, it was stated by the informants that the patient's disturbance started when one son entered the army and two other sons awaited their call to military service. A study of her previous records showed that the patient had shown exactly the same symptoms practically throughout her lifetime, and that due to her low mental endowment, these became grossly exaggerated in any situation involving strain. Her relationship to her husband was extremely defective; she also complained constantly about the

faults of her several children. This patient did not seem to be worried that her sons might lose their lives in battle — she only lamented that they were now incapable of supplying her with small sums of money.

Two cases showed signs of an organic brain disease. The first case was a fifty-seven year old white women with a normal prepsychotic history. She had been worrying since the draft began. On May 1, 1942, her son was drafted and sent to a remote base; three days later the patient's brother died. Since these two events she had been depressed and apathetic, and expressed the hope that "they'd bury her." The clinical picture was that of a cerebral arteriosclerosis with deep depression.

The second case suggestive of organic brain disease was that of a women forty years of age, who exhibited all signs of an early dementia, probably Alzheimer's disease. The prepsychotic history was reported normal. The patient had been a devoted wife and mother and was considered an excellent housewife. From the time her son entered the army and was sent to Australia, she grew depressed and repeatedly expressed the belief that she would never see him again. She became forgetful, talked to herself, showed loss of interest and became extremely fearful. She got lost on the street and thought her son was waiting for her at the corner. Finally she came to the attention of the authorities while roaming aimlessly in a public park. On admission she offered the picture of a prematurely aged, confused, disoriented female, with signs of organic cerebral damage.

## SUMMARY AND CONCLUSIONS

In the twelve women whom we have thus observed, the anamnestic impression was that the psychoses stemmed directly from the outbreak of the hostilities and the consequent draft of love objects. Careful and objective exploration revealed, however, that while in a few cases this might be among the etiological factors, in no case did it constitute the only precipitating agent. Other very severe traumata were present, (the death of a brother, a drunken husband, disappointment in love, etc.), all clearly showing the conflict of ambivalence. In many cases the draft merely represented a rationalization — a displacement from the conflict centering around the actual or ideational loss of an ambivalently loved person. It is interesting to note, furthermore, that the two cases where mental symptoms arose simultaneously with the induction of sons and actual separation from them over a long distance, were those wherein the clinical picture strongly suggested an organic brain disease. This would furnish added support to the known fact of the reaction of the total personality to organic changes, depending upon the whole mental and physical constellation of the individual.

It is a very familiar aspect of revolutionary inventions or political crises that they are frequently connected with disturbances in health, elaborated in delusional ideas and taxed as the causative factors of emotional derangement. The inner need for rationalization unconsciously finds expression in the information advanced by relatives and friends who seek to explain the symptoms of the patient in terms of concrete causes. In our experience, the information from relatives, although rendered in good faith, proved to be misleading with regards to the actual onset or origin of the psychosis.

## DISCUSSION

Conrad Sommer, M. D. (Chicago): Dr. Wallenberg has been very conservative in not drawing any wild conclusions from her material and I certainly agree with the point in her summary that it is always easier for us and we have less conflict if we can blame our troubles upon something that we weren't responsible for. Thus the mental conflict that the patient himself has who is developing a psychosis or that the family has about the relative who is developing a psychosis, is much relieved if he can say "The war did it". In just this way every psychosis in a woman beyond the age of forty can so conveniently be attributed to the menopause, — at least within certain limits.

A second factor that one might mention is the fact that when a main prop, a main stay of the family is removed, — the bread-winner or someone who is psychologically important, — then it becomes often necessary for the family to become conservative and to take less responsibility. The whole family structure collapses and it becomes almost unavoidable to say, "We do have somebody here who is insane and we can't take care of her any longer," and therefore these commitments occur at a time like this.

There are two guilt-producing mental mechanisms in this situation: One is the unfaced hostility that women have, to a greater or lesser degree, toward their men. When their men are taken away from them to face death, they of course are afraid to be glad about this. Thus the hostility often is displaced upon the woman herself as a punishment and a true melancholia following the mechanism of Freud may occur, and I think does occur in some of these cases.

The second guilt-producing mental mechanism isn't always guilt-producing. That is the natural and wholesome dependence that a women may have upon her man. If, however, that man happens to be a substitute, as apparently was true in one or two of these cases, where the woman has placed the affection and dependence she should have for and upon her husband upon a son and the son is taken away, that mobilizes a lot of guilt that the transfer of affection develops in a woman.

Or if a woman's relationship to her husband is essentially that kind of dependent feeling which she had to her father and now the husband is taken away, again the feelings and the anxieties and the conflicts that she may have had as a child about her father are re-lighted and mobilized and brought into focus.

Now in spite of the fact that not too much of a conclusion can be reached from this paper, I do think that it was a good idea that it was read and it should lead us to some further thought. I am thinking of the fact that most of us are in relationship to women; most of the men are in relationship and in close relationship to a series of women. I am in relationship to a wife and to a mother and to some sisters and some daughters, and I know that in these presumably more normal relationships and more normal psychologies there are anxieties and conflicts. By studying the serious end products of mental difficulties and going back and also thinking about and studying the less disordered psychological situations, we might be able to throw some light and be able to give some advice to the women of America upon whom heavier and heavier burdens are being thrown as more and more of the manpower is drained away in to the war effort.

Dr. F. Heisler, Chicago: Dr. Wallenberg's timely and interesting study of a limited number of cases of psychoses occurring in women who either had experienced an actual loss of, or were threatened with the imminent loss of one of the male family members to the armed services, offers an opportunity for interesting speculations.

Assuming for the moment that the histories as given by relatives had been correct in their stressing the draft of a brother, son or husband as the precipitating factor, the comparatively negligible number of psychotic casualities among women, as compared to the number occurring among men inducted in the Army and Navy, is, to say the least, surprising.

More surprising yet is the apparent fact that upon closer scrutiny of these histories the loss of a family member to the fighting forces no longer could be considered as the only or outstanding precipitating factor of the psychotic break, but that the patient either had had (1) several acute psychotic episodes previously, (2) or had been a chronic case of long-standing which probably developed a panic reaction to so formidable a threat, or (3) had been afflicted with an organic illness resulting in a specifically predisposed individual in rapid mental decline and deterioration, as a complete response to an unacceptable deprivation. Interestingly I have had an opportunity to observe several similar cases as Dr. Wallenberg has studied, and I can only corroborate her findings.

It would seem to me that from the cases studied two groups of women are primarily affected; that is, the young adult, and the women in the menopausal age. So far extremely few cases have been observed in that large group of women in their prime who, in reality, give up a great deal; that is, their husbands and the fathers of their children. (These women may swell the ranks of psychoneurotics).

Isn't this what we might expect? Are not those two periods the important crossroads in a woman's life which call upon a pooling of all her essential personality functions, affective, conative and cognitive capacities?

We know that in general the less secure and stable an individual's early home and family relationships have been, the more threatening become the demands of adult life. The more poorly integrated adolescent or young adult with vaguely understood ambitions and ill-defined goals, knowing only hollow performance and shallow experiences, is hardly equipped to meet successfully the collective insecurity imposed on everybody by the war, and more specifically on those families with men in draft age. To such women the rupture of even rather superficial heterosexual attachments, or adjustments to intense sibling rivalry situation, or under oedipal situations, may mean inner bankruptcy.

Analysis of Dr. Wallenberg's group, as well as the few personally observed cases, indicates that the majority of the specifically considered casualties consists of women in the involutional period. Rather uniformly these women showed marked ambivalent feelings towards those called into service. Under the tremendous threat of possible death, intense guilt feelings were brought to the surface with consequent depressive or agitated reactions.

In conclusion I should like to mention two cases recently observed in two young married women, both married to psychoneurotic husbands. One of these women, thirty-one years old, married for eleven years, childless, had been hospitalized two years ago with a diagnosis of dementia praecox, undetermined type. After improvement and fairly successful adjustment at home for one and a half years, she gradually drifted into a state of depression with almost complete mutism under the threat of her husband's draft into the Army. She showed marked improvement with the first electric shock, and after three treatments was able to discuss spontaneously and with great insight her submissive role in her marriage, her increasing resentment towards her husband's overprotectiveness exaggerated beyond all former limits in response to his own fear of being drafted. Patient spontaneously described the struggle between her patriotic feelings calling for her husband's and her sacrifice, and a development of intense guilt feelings and fear of hurting those she loved if she should refuse complete submission to her husband's desire to keep her in a state of complete

dependency. This patient completed her treatment five weeks ago, and at present is being trained as a volunteer worker with the Red Cross in order to do her share in this great struggle. Interestingly enough, the husband showed increased tension and anxiety as the patient improved.

The other case, a young women of borderline intelligence, with a marked degree of dependency, and a life-long immature response to frustration, went into a state of excitement in response to the constant daily threat voiced by her husband about his imminent draft. This patient harbors a deep-seated hostility to her husband, and no doubt developed a psychotic episode as an escape from her destructive aggressive impulses, which reached a peak under the threat of possible death of her husband.

I feel Dr. Wallenberg's study is very valuable, and should be continued covering a large number of cases and over a longer period of time. The prolongation of deprivation of all kinds, external and internal insecurity and sexual maladjustment situationally conditioned, may well precipitate psychoses among a considerable number of women as the war continues to stretch into the future.

Reorientation to needs of a rapidly changing social structure, shift from the socially accepted pattern of dependence and passivity to one of independence and activity, will no doubt prove to be a problem of too severe propensity to more and more women. A prolonged study might probably point out to us some special factors as to the prophylactic and active treatment of such casualties.

M. Wallenberg, M. D. (Manteno): I want to thank Dr. Sommer and Dr. Heisler for their kind discussions.

I just want to mention that among the material we observed there was, until now, only one women who according to the information we received broke down after her husband was drafted. All the other cases were concerned with sons, cousins, etc., and in this one case we learned that in reality she had been divorced from her husband, so this just corroborates the fact that the relatives falsely tried to explain her breakdown by the thought that she could not stand the separation from her husband.

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In spite of wartime difficulties the Ministry of Health (British) has decided to intensify the offensive against tuberculosis. The new campaign has been summarized as one which will no longer require medical science to wait for tuberculosis cases to come to it, but will enable it to go out and look for them. It is true that there were 25,000 deaths from tuberculosis in 1942, as compared with 28,000 in 1941 but this encouraging sign has not induced any complacency in the Ministry of Health. Even in wartime the nation cannot afford to ignore an enemy which kills 25,000 people a year. — *Ed., Jour., Roy. Inst. P. H. & Hyg., June,* 1943.

## A STUDY OF THE RESULTS OF ELECTRIC SHOCK TREATMENT

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ELGIN

Since electric shock treatment has become almost universally accepted in the treatment of the functional psychoses, numerous statistics ranging from very small series to statewide surveys have been published in an attempt to evaluate this therapy. From a statistical viewpoint small series are of no real value. Large series, like those included in Malzberg's survey of patients treated in New York State Hospitals, and Kalinowski and Worthing's series of two hundred schizophrenics treated in one hospital, seem more reliable. Their conclusions that electric shock accounts for about 40% good remissions, 28% mild improvements, and 32% failures agree in general with the results obtained at Elgin. Such studies indicate the general value of electric shock treatment, allowing each patient an expectancy for improvement on a probability basis. The application of these group statistics to the individual case is important to us. We must answer the question: what are the chances that any individual will improve following treatment? Here we see the pitfall of many statistical studies: into the same classifications are placed non-homogenous groups of cases, different criteria of diagnosis are applied by various staffs or even by different physicians within the same hospital. Because of this heterogeneity in statistical grouping, slight meaning can be attached to the statement that any patient has thirty chances in one hundred of having a remission.

It is well known that certain groups of patients show better results than others. For example, the depressed and agitated patient is an excellent prospect for electric shock treatment while other types do not respond so well. Still we have surprises in both directions. Therefore, we must search for the common factors responsible for success or failure. Our present diagnostic classifications, being purely descriptive, seldom furnish any clues regarding the significant and common factor or factors which would indicate those patients who are accessible to treatment. In this paper an analysis is submitted

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of typical clinical psychiatric observations on typical cases during treatment. From this analysis those facts which seem significant are brought together into a working hypothesis.

The following paragraphs summarize a series of cases, each one typical for its group. No claim is made that the results achieved in each case are typical, but it is believed that all cases show features which may be considered responsible for either success or failure of treatment.

Case 1. H. D. Diagnosis: Dementia Praecox, catatonic type.

18 year old single girl, second oldest of eight siblings. Clinically patient offered signs of acute schizophrenic excitement. Pathogenetic factors in the disturbed father relationship with considerable guilt because of hostility due to father's attitude. He was said to have sexually attacked the girl. Marital discord of parents. Excellent school record. Worked from the age of 14 as a maid. First symptoms two years previous to admission consisting of hallucinations. Nine months prior to admission became seclusive. Here she was restless, excited, sang, prayed. Intra-psychic ataxia. Ten convulsions. Improved rapidly. Claimed complete amnesia. Superficial insight; affect rigid. Paroled as improved. Seen after three months she seems to have recovered without residual defect. Excellent outside adjustment. Little psychotherapy was given.

Case 2. *A. S.* Diagnosis: Dementia Praecox, catatonic type.

26 year old single white woman. Eighth grade education. Worked as maid. Outstanding features are guilt and anxiety which probably originated from her intense relationship to her brothers and quite possibly from identification with her mother who is a patient at Elgin. Sudden onset after two brothers went into Army. Here, mute, resistive, feeding problem, weeps under sodium amytal. Admits vague guilt feelings and hallucinations. Expressed fear of insanity. Stereotyped thinking and some suicidal tendency became evident during treatment. Received fourteen shocks. Improved showing normal affect, partial insight, but partial amnesia for height of psychotic episode. Was seen four months after parole. Adjusts excellently. Completely recovered. Moderate amount psychotherapy of superficial and reassuring type was given.

Case 3. *M. B.* Diagnosis: Dementia Praecox, paranoid type.

A 29 year old single white women, older of two siblings. High school graduate, good school and work record. No attempts at heterosexual adjustment. Clinically this case had all the earmarks of paranoid schizophrenia with fairly well developed disintegration and withdrawal from reality. Considerable projection of her hostility and secondary anxiety springing from fear of retribution was predominant. Unacceptable homosexual trends might have been factors of primary importance in the genesis of her psychosis. Lost her position, shortly thereafter her sister married. Patient became nervous, irritable, developed ideas of reference. Parents carried on for two years, moved, had her in several private hospitals where she had some electric shock treatments with moderate improvement. Finally had to be committed as it became too hard for the family. Here she is confused, incoherent, antagonistic and paranoid without system, hallucinates and shows withdrawal from reality with general indifference but occasionally an outburst of resentment and hostility. Electric shock treatment was given and supported by psychotherapy which allowed for considerable catharsis and superficial discussions of her problems. Improvement set in rather late and quite surprisingly. Her withdrawal from reality became less, her thinking disturbance improved, affect became more adequate. She became amnestic for her old paranoid ideation and hallucinations, but was still viewing her environment in terms of possible harmful effect on her. Her change in attitude was striking, both in appearance and in the return to normal thinking without symbolization or incoherence. Residuals were a steady suspiciousness and tension, some vagueness of thinking. She was paroled and when seen one month later had kept up her improvement, adjusting well, although in a very protected environment. Due to her suspiciousness and fear of rehospitalization the parents did not bring her in for psychiatric check-ups, but continued to report a satisfactory adjustment after three months. Result of treatment was alleviation of her anxiety, allowing her to give up her withdrawal, making for better relationship with her environment. The basic process of her illness was, of course, not touched at all.

Case 4. *M. I.* Diagnosis: Dementia Praecox, Catatonic Type.

A 22 year old married women. Only child of her mother, overly protected. This patient showed decidedly regressive features from the beginning. Her genuine fear of destruction from within while pregnant appears to be a pathogenic factor. This fear seemed to be primary and not secondary to her own hostilities. When six months pregnant she became restless, hyperactive, slovenly. After delivery, displayed anxiety, had ideas that she was hypnotized by her husband, that the baby was dead. On admission she was fearful, excited, became frankly cataleptic. Electric shock treatment was given (15 treatments) and patient showed enough improvement to be paroled. Adjusted poorly in an unsatisfactory environment and relapsed fast. Upon return the picture was more one of hebephrenic excitement with progressive disintegration. A second course of electric shock treatment failed to improve her materially and at the present time she is confined to an untidy and disturbed ward.

Case 5. *M. E.* Diagnosis: Psychoneurosis, anxiety type.

A 39 year old married woman. Born an illegitimate child, was crudely told about her being adopted when 9 years of age. Adored her foster father but parents divorced. Mother with whom patient stayed had an affair with a young boy. Patient experienced many humiliations and rejections, never had emotional security. Outstanding are her inability at marital adjustment and ambivalent attitude towards mother and husband, guilt and anxiety, resulting in self-destructive tendencies. First breakdown occurred when 27 years old, following a sexual experience which she failed to assimilate, apparently due to guilt. Again broke down after she had a hysterectomy which had removed her supposed reason for frigidity, without, however, making her enjoy intercourse. Recovered after metrazol shock treatment. Became again depressed, anxious and suicidal when her husband proved to be very inconsiderate after she had lost her job. Here she was depressed, mildly agitated, and made numerous half-hearted suicidal attempts. Electric shock treatment (8 treatments) were given accompanied by psychotherapy, consisting of discussion of her sexual problems and her hostility towards her husband, without going too deep. She improved, was paroled and at present works efficiently as a bank clerk.

Case 6. *E. E.* Diagnosis: Depression in the involutional period.

49 year old widow. Had numerous depressed spells for many years, always in connection with a biological event such as menses, childbirth. Mother died in involutional psychosis when patient was 17 years old. Last attack followed menopause. Outstanding are considerable guilt and consequently fear and anxiety. Patient is only partially able to assimilate her hostility into paranoid projection; developed auditory hallucinations, paranoid ideas involving neighbors, her brother-in-law; was afraid of being killed, thought people talked about her as a bad woman who was sexually promiscuous. Quite depressed and mildly agitated. Received 10 electric shock treatments, improved very much in that she was no longer depressed, gave up her delusional ideas and hallucinations, worked well. Was paroled and adjusted well for over three months. Was seen recently, is still adjusting but has again developed ideas of reference and mild paranoid tendencies. However, she is trying hard not to succumb again.

Generally speaking there are three spheres in which the patient may show improvement. (1) ideation; (2) affect; and (3) overt behavior. Improvement in ideation and/or affect always brings about improvement in overt behavior. This is the ideal sequence and the aim of therapy. In many cases, however, we find only overt behavior improved. These are temporarily improved institutional adjustments in schizophrenic and involutional patients of long standing. Still it is difficult to believe that electric shock works with different mechanisms on different cases. Since overt behavior manifestations are end-products in which ideation and affect play important parts, it is these latter functions which must be subject to change by this treatment.

In order to approach the problem methodically we have to discuss first clinical manifestations of change in patients while under treatment. They are not always present and not always in order enumerated, but all of them were observed with reasonable frequency to be considered significant.

1. *Confusion* sets in rather early, is desirable, and with the help of the therapist it disappears fast. However, there is a form of confusion secondary to impairment of memory. It sets in late, is apparently due to complete disorientation of the individual in respect to his existence, thus arousing anxiety. This usually clears up after a period of several weeks.

2. *Disappearance of anxiety, agitation and depression.* This occurs rather early in the course of treatment. It is the most dramatic feature in the improvement of cases showing these symptoms and, in our opinion, the one most closely connected with the mechanism of therapy.

3. *Partial or total amnesia* for conflictual material and psychotic experiences. Although there is doubtlessly a temporary organic component causing true amnesia for recent events, the selectiveness of this phenomenon suggests that we are dealing here with true repression of material which has lost its compulsive quality and has become highly undesirable for reality-testing functions. It is not always present but only one of the many ways by which the individual can re-establish his mental equilibrium without resorting to psychotic mechanisms.

4. *Crystallization of paranoid material* previously only suggested or activation of such material where previously absent. This, too, seems to be an attempt at rehabilitation, but on a psychotic level. The patient is unable to forget but he is able to explain and turns to a paranoid elaboration of his experiences. This is apparently a substitute solution.

5. *Mild euphoria to silliness* or *frank manic behavior* of various durations and intensity are observed. Usually self-limited and mild in na-

ture, this euphoria is easily understood if one considers the liberation of the patient from material which contributed to his breakdown. The silliness seen in many cases appears similar to that observed in organic or frontal lobe cases. Again, we observe some patients who gain considerable weight due to voracious eating habits similar to those frequently seen in cases of organic brain disease.

6. An interesting symptom and difficult to evaluate is the appearance of *conversion symptoms* in the course of improvement. It is striking that in many cases unfounded somatic complaints precede recovery.

7. The critical observer frequently notices *impairment of intellectual faculties* as evidenced by difficulties of many patients in grasp, verbalization, or judgment. In combination with euphoria it presents the picture of "slap-happiness." This is nearly always temporary and reversible. This phenomenon has no correlation to the number and severity of shocks, nor to the degree of improvement.

To understand the significance of the physiological and psychological events we must keep in mind that electric shock treatment is psychosomatic treatment "par excellence." The following discussion is divided into organic and psychological aspects only for purposes of analysis.

What happens during electric shock? The current passing through the brain stimulates and depresses the brain cells. The threshold for stimulation and depression of different types of cells is apparently at various levels for each group of cells. This is manifested by a convulsive seizure and loss of consciousness. So much can be seen clinically. Experimental work on animals has shown that damage to the ganglion cell is present although it is temporary and reversible. The apnea lasting up to one minute undoubtedly causes anoxia and thus some alteration of brain metabolism. The exact nature of this alteration is unknown. Basically, it probably represents a change of milieu which we cannot dismiss if we think in biological terms. Attempts have been made to correlate electroencephalographic findings with psychiatric observations and thus to establish the connection between somatic and psychological variations. E.E.G. readings have shown abnormalities correlated with psychotic manifestations but still they have failed to demonstrate that an anatomical substrata exists for improvement or failure. Levy and Grinker, on their part, found no correlation between abnormalities in E E G tracings and manifest organic damage as evidenced by intellectual impairment and silly euphoria. Vice versa, quite abnormal readings were not associated with clinical symptoms.

But much more happens to the patient under treatment than just a weak current passing through his head for 0.3 of a second twice a week. He is given repeatedly the benefit of short amnesias. These have a tendency to converge and may constitute a powerful aid in the removal of conflictual material. This lessens the compulsive quality of psychotic thinking or action, and the patient becomes assessible to psychotherapy. The treatment situation in itself, if considered from the patient's point of view is a repetition of an ancient interpersonal situation: the individual delivers himself into the hands of a strict, but in the end forgiving, parent figure who will mete out punishment justly and thus allow atonement and delivery from all evil. Much human thinking and symbolism revolve around such an axis of retribution, equilibrium between good and evil. The acceptance of punishment allows the patient to bargain with his conscience, fear and anxiety becoming unnecessary when retribution has taken place. Of course, many patients oppose treatment, they struggle, they are deathly afraid. But this only emphasizes that they are in fear, a fear resulting from threat. It has been said in defense of electric shock treatment over that of metrazol that the fear aroused by the latter treatment is absent with electric shock. But we have yet to see the patient who does not display at least apprehension about the outcome, and even those who undergo treatment quite submissively and cheerfully do so in a rather masochistic manner. Treatment is dreaded by every patient. Their reaction is different: for some it is not more than a cold shower; for others it is equivalent to destruction. No one can deny that this represents a powerful psychological factor, whatever the significance may be.

Another facet of the intriguing problem of dynamism is the fact that we can observe in the course of treatment a partial and temporary disintegration of the higher levels of the person-

ality. Impairment of judgment and memory, confusion and euphoria speak for what we may call, with linguistic reservations, a mild and temporary decortication. This, in turn, allows the patient to rebuild his personality with or without defects. Here constructive psychotherapy has to act and aid the patient although many patients can accomplish much without great help, merely by re-orienting themselves. At this point one must evaluate the pre-psychotic personality equipment of the individual. Although "auto-psychotherapy" if it is permissible to coin this term, is available to most patients, one should not rely on it and psychotherapy of at least reassuring character is an essential part of good supplementary treatment. Due to the physical character of electric shock treatment the therapist is in the favorable position to be accepted fully as a physician which again makes the patient more accessible. This accessibility, enhanced by all the factors discussed previously, offers an opportunity which should not be missed.

An intriguing subject for study is the problem of the psychobiological significance of the convulsive discharge, spontaneous or induced. I believe that here, too, is important material for investigation from a psychosomatic angle.

SUMMARY

The analysis of electric shock therapy indicates an intricate network of organic and functional events which are interrelated and interdependent. None of the empirical or theoretical factors can be made solely responsible for what happens when a patient improves under treatment. Some of it is quite hypothetical and may, after new evidence has been brought forward, be untenable. But, in order to give our procedure the appearance of scientific method, we have to elevate it above the practice of application on purely empirical grounds and work it under the guidance of a working hypothesis. Accepting this principle we shall have to look for certain predominant features in our cases. These will include:

(1) the elements of guilt as evidenced by anxiety and depression;
(2) the absence of severe disintegration or regression;
(3) only moderate and still fleeting paranoid elaboration;
(4) a certain superficiality of the whole process.

Old chronic conditions respond only in respect to acute exacerbation. The nucleus of the personality is not reached by treatment.

Consideration of these principles will allow us to evaluate our hopes and results in the correct proportions.

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DISCUSSION

C. F. Read, M. D., (Elgin): Mr. Chairman and Members of the Association: In view of the fact that we have so little time and that my thoughts upon the subject are not any too well organized, in spite of my exposure to the procedure and effects of shock therapy during the past six years, I shall be brief.

I have enjoyed Dr. Gronner's commentary upon electric shock therapy and its results as he has seen them and as he has interpreted them from time to time in his contact with many patients who have recovered and who have not recovered.

Still, we must always remember the fact that many patients make spontaneous recoveries and that convulsive shock therapy perhaps only precipitates or makes more rapid the improvement of the patient, an observation which would seemingly throw out any specific effect of the therapy as we conceive of specificity in connection with the use of quinine in malaria and arsenicals in syphilis.

So what *does* this procedure effect?

I believe thoroughly that we must keep in mind here that in the electric shock therapy we are producing a traumatic intensive organismal reaction in a single convulsive shock. The patient goes through changes such as may occur, spread out over a very considerable length of time in the ordinary mode of existence.

Where does this personality that we talk so much about reside? Certainly it doesn't reside merely in the head. The brain is the distributing station, it has to do with personality, of course. We know that without the brain we haven't a feeling, thinking organism and

still we speak much nowadays of psycho-somatic medicine and in that imply that the organism as an eitiy is acting as a whole.

So I believe that personality is the evidence of the entire organism in action.

Where do these feeling-thought patterns reside that have become fixed, distorted, disturbed in their growth and development in early childhood?

Someone has suggested that possibly the capillary bed has much to do with such patterns. I don't know anything about that but I suspect that there is a considerable, quite universal involvement of the organism in the production and fixation of these patterns and in their exhibition from time to time. The question remains as to how this intensive reaction that occurs in response to electric current affects the vegetative autonomic nervous system and all the other systems of the body to influence action patterns which, in time, become evident in what we call psychotic symptoms.

G. G. Piers, M. D. (Chicago); Mr. Chairman, Fellow Members of the Society:

It seems to me that Dr. Gronner's paper manages to steer clear from two equally dangerous extremes which loom large in a field of research where we have to put up with so many unknown factors. On the one hand we have the danger of plain statisticism if I may say so, void of any pertinent answers, usually because the questions asked are not aiming at the core of the problem. On the other hand, there is a danger of a scholasticism which endeavors to press clinical facts into pre-fabricated theories.

This paper describes and groups good clinical observations and in my opinion does not represent any conclusions or suggestions that are not warranted by the material.

Taking the chance of being accused myself of scholasticism, I would venture to make a suggestion which might further simplify the grouping of the clinical data. Dr. Gronner has described seven groups of clinical changes occurring in patients undergoing convulsive treatment. It seems to me that five of these groups might possibly be attributed to the psychobiological events of the shock or shocks, as such.

The "virtual death" of the shock submerges the ego into a state of almost non-existence from which it emerges in a way somewhat similar to what Federn has described as orthriogenesis. *Amnesia* and *impairment of the intellectual faculties,* — if not purely organic, certainly might be described as remainders of the deepest state of non-existence.

*Confusion,* the third group, is probably the next step in the attempt to find one's self in the new world. In this connection, formation of *conversion symptoms* as described by Dr. Gronner seems of particular interest. One is tempted to attribute these to a level of psychosexual integration comparatively higher than the one of the individual psychosis. They might be reaction formations against reawakened genital drives. Of course, *crystallization of paranoid ideas* is to be considered also a reintegration of the ego, but on a psychotic level.

*Disappearance of agitation, anxiety and depression* and also *euphoria* point to a different mechanism, namely: to alleviation or placation of destructive guilt feelings. Indeed, it always seemed to me that convulsive treatment is particularly apt to succeed in cases in which there are strong self-destructive tendencies at work. In these cases electric shock seems to be definitely superior to insulin treatment. Dr. Gronner has come to similar conclusions, as his summary indicates.

That the superficiality of the process makes for a good prognosis goes without saying. The so-called vagueness of paranoid ideas is sometimes an indication that we have to deal with a so-called primary delusion of the acute schizophrenic catastrophe, whereas systematized conclusions belong to a later restoratory period.

As regards depth of regression, I would tend to be less pessimistic because even severely regressive behavior might be but a fairly superficial defense. This goes particularly for many catatonics.

Again I want to congratulate Dr. Gronner for his fine paper, which I hope will stimulate not only thought but also clinical investigation.

R. Gronner, M. D. (Elgin): I wish to thank the discussants for their comments, which were quite stimulating to me.

To answer Dr. Read first, there was never any specificity claimed for electric shock treatment. It is merely supportive treatment, — supportive to the inherent tendencies of the organism to overcome illness.

To Dr. Read's question where personality is seated: This would get us away from clinical psychiatry and get us into philosophical questions and metaphysics; while such discussions are very stimulating and interesting they would need too much time to draw conclusions.

Dr. Piers spoke of the death drive, of the experience of total destruction and rebirth. In the original copy of this paper this comment was included, but due to the fact that this particular problem is too much under dispute now, I did not feel qualified to take it into consideration.

Dr. Piers expresses objection to regression as a particular malignant feature. While it is true that some patients with a great amount of regression do improve and recover, they are rather an exception. There are exceptional cases of catatonics where regression is a primary defense mechanism and does not serve to further disintegration of the personality. In those cases of course we see much success.

I wish to thank again the discussants and the Society for their interest.

# NONSPECIFIC ULCERATIVE COLITIS — BLOODY FLUX

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Dysentery of all types, amoebic, bacillary and idiopathic, is endemic in many rural districts, in the crowded poorly housed section of cities, in military camps and in prisons. Every now and then it breaks out in epidemic form. Nonspecific or idiopathic colitis is recognized as one of the more frequent and certainly more perplexing disturbances of the digestive tract; its etiology is not understood; its pathogenesis is always complicated by secondary factors; its symptomatology is usually severe and quite variable; and its prognosis is always qualified because its treatment in unsatisfactory. The control of ulcerative colitis is of more than usual importance because of the large gatherings of troops in camps throughout our own country and in foreign lands, and because of the poor housing and unsanitary conditions which are inevitable from mass shifting of civilian populations. Medical and lay publications already report a high incidence of this disease in China, Russia, Germany, Italy and Japan all of which are combat areas where our boys are located.

*Etiology* — The etiology of this syndrome is obscure, but several underlying factors deserve our consideration.

1. A bowel infection may be presumed to be the exciting cause. Unrecognized amoebic colitis is estimated to account for 3 to 5 percent, and chronic bacillary dysentery for 15 to 20 percent. In the other groups smears and cultures from the ulcerated areas and biopsy specimen yield only a wide variety of hemolytic and non-hemolytic organisms including B. coli, dysentery organisms, streptococci, staphlococci, gram positive, spore bearing bacilli, yeasts and moulds. Some of these are pathogenic and others are nonpathogenic organisms of the stools.

2. Improper, unbalanced and inadequate diets together with deficient secretion of digestive enzymes and ferments is often a factor in chronic diarrheas. At present this is a popular subject in all constitutional disturbances including arthritis and cancer.

3. Organic pathology of the colon or rectum and especially anal fissure, hemorrhoids, fistula, cryptitis, polyps, diverticulosis and neoplasms are found in many cases.

4. Psychoneurosis is often evident. It presents individual variations of which psychic trauma, cancer phobia, sexual mal-adjustment or marital incompatability and escapement diarrhea are very evident though it may take patience to determine it as a factor.

*Pathogenesis.* — The mucosa of the bowel may be so changed by the inflammatory reaction of secondary infection or other organisms as to crowd out the original infectious organism. Linn[1] demonstrated that spasm of the intestinal musculature, induced by dysentery toxin, mechanical stimulation, or drugs eventually produce severe damage to the colonic mucosa to the extent of ulceration and gross hemorrhage. Thus hyperactivity of the parasympathetic nervous system, bacterial infection and vitamin deficiencies, by causing colonic spasm, may produce the clinical syndrome of ulcerative colitis. Before the diagnosis of nonspecific colitis is made one must be sure that the symptoms are not due to some organic condition of the gastrointestinal tract which has been overlooked, food sensitivity or cardiovascular disease.

Proctoscopicly the mucosa of the rectum and sigmoid is edematous, bright red inflamed and studded with pin point bleeding spots. If there be no active bleeding when the examination is begun the procedures incidental to the examination will induce bleeding. A few days after the onset of the diarrhea small superficial ulcers, 1 to 2 millimeters in diameter, are found on the crests of the folds of the mucosa.

*Symptoms.* — The cardinal symptoms present in all patients are:

1. Diarrhea with blood and pus in the stools.
2. Fever, septic in type the so-called "picket fence" fever.
3. Progressive loss of weight.

Diarrhea: A given attack may begin with:

1. Acute stubborn constipation, anorexia and vomiting but the next day diarrhea supervenes, or
2. After a dietic indiscretion the individual is suddenly taken severely ill with vomiting, abdominal cramps, tenesmus and a diarrhea of 10 to 20 stools per day, or
3. Without ascribable cause the stools become fluid and multiple per day.

1. Linn, Rolf: Etiology of Ulcerated Colitis, Arch. Int. Med. 63:120, 1939 ibid Amer. J. Path. 15: 73, 1939.

Onset: The acute fulminating or gangrenous type begins with alarming suddenness during a bacillary dysentery or some other pyogenic process. The stools at first are semiformed but after a few evacuations they become fluid, glairy and sticky and contain much mucus. One defecation may be composed of blood and feces and the next one be a frank hemorrhage. Shreds of mucous membrane or casts of the bowel are sometimes expelled. In a group of 47 patients intensively studied diarrhea came on insidiously or following a dietetic indiscretion in 26 patients and with alarming suddenness in 21 patients. All of them observed blood and mucus in the discharges and had colic and abdominal tenderness. Under treatment

12 had soft formed stools after the 8th day.
19 had soft formed stools after the 14th day.
31 had soft formed stools after the 21 st day.
44 had soft formed stools after the 28th day.
3 did not recover soft stools.

Dehydration: With this great loss of fluid from the bowel the patient develops an intense thirst, a dry coated tongue, anorexia, nausea and vomiting, and an emaciated anxious appearance together with a feeling of collapse and mental depression.

Fever: There is usually an initial chill followed by a fever of 102° to 104° F. which is septic in character; that is 97° F. in the morning and high in the evening.

Abdominal cramps, colic and tenesmus are associated with borborygmus, distention and tenderness of the abdomen and also leg cramps.

In this group:

2 had diarrhea without fever
1 had high temperature 104° for 4 days and died
1 had diarrhea and fever after 4 months treatment although I shifted from iodoyquinolin sulfate to sulfaguanidine and later to succinylsulfathiazole without relief.

Emaciation:

Anemia: There is always a drop in the blood morphology, the
Hemaglobin was found 42% to 76%
Erythrocytes were 2,500,000 to 4,200,000
Leukocytes were high — 12,600 to 21,000

Loss of weight: All of our patients showed loss of weight varying from 10 to 42 pounds. Some were definitely emaciated and 3 were cachetic.

Recurrences:

8 patients were in their first acute or severe attack
1 died whose attacks were unconfirmed
38 had had previous attacks with remissions spontaneous in 12 while under treatment in 25

The Chronic Dysenteric Group — This group is less severe and may be graded as subacute. They are ambulatory patients who are still able to carry on their usual vocation. This is the more frequent type of dysentery. The onset is gradual and the chief complaint is of diarrhea with blood and mucus, localized areas of tenderness, with colic and borborygmus and progressive loss of weight. The stools are often fluid and bile stained. Spontaneous remissions and relapses follow each other at varying intervals. These patients carry low temperatures or none at all. In the remission period these patients are usually constipated.

Recurrent dysentery: These patients may have passed through several attacks of diarrhea with its resultant invalidism and fibrous distortion of the colon. They may present themselves during a quiescent period when they are symptom free and enjoying a degree of health; or they may be in the infectious and inflammatory stage with abdominal distress, anorexia, headache, malaise and exhaustion. They have all lost some weight. Whether these patients are suffering from an old complaint from which they had not fully recovered, or from a secondary infection, or from an acquired hypersensitivity, allergic bowel, is to be determined.

Convalescent patients: These individuals are now symptom free. The diarrhea is likely replaced with constipation but such persons should be kept under prolonged observation with periodic rechecking because dysentery may develop whenever the general health is impaired by intercurrent infection, fatigue, exposure or malnutrition.

In this study of 47 consecutive diarrheal patients,

8 were acute fulminating in character
19 were recurrent active at present
12 were recurrent constipated at present
8 were convalescent symptom free except for underweight

Convalescent patients who are free of dysentery should always be kept under as high a physical state as possible. Most of them are underweight. Their neurotic background is evidenced by flushing, sweating and nervousness, tachycardia is quite noticeable. Insomnia is frequent. The physical frailty is expressed by backache, frontal headache, aching in the leg muscles on walking in the morning or after prolonged rest, and general inertia. The digestive apparatus is below par, anorexia or a tendency to nausea is accompanied with belching after meals; colicky pains in the lower abdomen; difficulty in establishing normal bowel action; constipation or looseness is the rule; and there may or may not be abdominal tenderness. All of these symptoms may be suggestive but are not diagnostic manifestations.

Diagnosis: The differential diagnosis of food allergy, spastic colitis, mucous colitis and nonspecific, amoebic, bacillary dysentery cannot be made from clinical manifestations alone, proctoscopic visualization of the mucosa of the bowel together with a bacterial study of smears and cultures obtained from the mucosa and the discharges augmented in some cases with biopsies are absolutely necessary. Because of the complicated background in these patients an exhaustive study is essential before establishing a diagnosis as to the type of streptococcal colitis present. This is best conducted in the hospital that we may learn

(1) The course of the disease as to periods of diarrhea and constipation and its seasonal characteristics.

(2) The number of stools per day and their character as to fluid, blood, mucus, and flatus. Protozoan infections should be considered in the acute as well as the chronic diarrheas.

(3) Blood serum agglutination for dysentery organisms — Shiga and Flexner — should be made.

(4) The physical check up will include (a) study of the patient's diet as to calories and vitamins, (b) loss of weight, (c) complete differential blood count, urinalysis and temperature chart, (d) estimation of gastric acidity. Insufficiency or absence of hydrochloric acid in the stomach is often found.

(5) X-ray evidence by means of a barium meal and enema. Medication with mineral oil, bismuth or barium interferes with proctoscopic inspection and makes microscopic identification of organisms uncertain or impossible.

Proctologic study:

Proctoscopic examination was made at our first examination of each patient and repeated at three day intervals while our patient was under intensive treatment. Direct inspection of the mucosa is our most informative procedure in the differential diagnosis of both functional and organic lesions, and of the types of infections and ulcerative lesions of the terminal bowel. The last 15 to 25 centimeters of the sigmoid and rectum can be visualized. In institutional practice a carrier may be discovered though he may have otherwise negative findings. The procedure may be conducted on children as readily as adults. One of our patients was a boy four years old. By repeated proctoscopic examinations the mucosal changes will be found to correspond with the clinical syndrome. Although the anus may be inflamed and the sigmoid spastic proctoscopy may be performed without the use of analgesic or anesthetic if gentleness and patience are combined.

Early in a diarrheal attack the mucosa of the sigmoid and rectum is edematous, inflamed to a scarlet red and so swollen that the bowel lumen is occluded. If there is no bleeding or free blood in the bowel at the time the patient presents himself the manipulations incident to digital and proctoscopic examination will cause bleeding. At this time there is also much clear and coagulated mucus in the bowel.

After the diarrhea has become established the mucosa will be found studded with pin point bleeding spots or with small superficial ulcers 1 to 2 millimeters in diameter. The bowel contains free blood and mucus and shreds of mucous membrane. In the nonspecific colitis and in the bacillary colitis the entire mucosa is involved but in the amobic disease there is virtually no reaction in the tissues outside of or surrounding the ulcers. Amebic ulcers are sizeable erosions not pin point spots.

Smears and cultures from the ulcers, the free mucus and the stools are made at each proctoscopic examination. The clinician must not be

mislead by his findings. A positive finding establishes the diagnosis as to the type of infecting organism but a negative finding does not exclude its possibility. In this group smears have been continued at intervals since our patients returned to their former activities.

Intestinal tuberculosis is to be suspected in patients suffering with pulmonary tuberculosis especially if there has been a period of constipation earlier. The abdominal symptoms may be those of indefinite dyspepsia or indigestion. An X-ray study of the digestive tract following a barium meal will show rapid emptying of the stomach, hyperirritability of the bowel and perhaps a filling defect in the cecum.

*Diagnosis.* — In collecting this group of patients whose chief complaint was diarrhea we found 5 cases of malignant disease of the digestive tract. Two were in the rectum, 2 in the sigmoid and 1 in the cecum. Also 1 case of diverticulosis, and 1 of intussusception in a boy of four years.

Though the newer bacteriostatic and bactericidal drugs have a low toxicity it is due to their slow absorbability from the intestinal tract. In the presence of obstruction of the intestinal canal increased absorption may occur and toxicity may appear. Intestinal obstruction is an absolute contraindication for the administration of any bactericide such as is recommended for diarrhea.

Persistent diarrhea is an important clinical symptom and is frequently most unfortunately treated by the internal administration of opiates and astringents. Chronic diarrhea is the expression of some localized irritation, and should be treated as such. Many cases of malignancy of the rectum and sigmoid have for their early symptoms persistent morning diarrhea. These are treated by internal administration and dietary restriction until the local symptoms manifest their presence when it is frequently too late to think of operative intervention. A proctoscopic and sigmoidoscopic examination should always be made in all cases of persistent diarrhea. Diarrhea due to localized irritation of the sigmoid and rectum is common, and is one of the most frequent symptoms of fecal impaction.

58 East Washington St.

## ADVISE MENTAL INOCULATIONS AGAINST WAR DISEASE HAZARDS

### Two Navy Doctors Say It Is Only Effective Preventive Against The Ill Effects Due Entirely To Exaggerated Fears.

Mental inoculation is the only effective preventive against the ill affects due entirely to mental attitudes often accompanying exaggerated fears of the ravages of disease and war, Lieut. Howard P. Rome (MC), U. S. N. R. and Lieut. Comdr. R. Harwood Fogel (MC), U. S. N.R., declare in *The Journal of the American Medical Association* for December 11.

"The value of prophylactic psychiatry in raising the threshold of vulnerability to psychologic (mental) disorders cannot be overestimated," the two men say. "The psychologic stability of soldiers is directly proportion to their factual knowledge of the situations in which they will serve. For the average individual the ravages of disease and war are exaggerated. Information of this sort is rarely limited to specific individuals. Since the hazard is a common one, it has the property of diffusion and the awareness of it rapidly becomes universal. It has been amply demonstrated that psychologic inoculation is the only effective preventive. Latent and imaginary dangers are naturally shocking on initial recognition, and attendant anxiety can be dispelled only when men are given an understanding of the irrationality and emptiness of most of their fears. A patient, simple, repeated presentation of facts will in most instances assuage doubts and 'debunk' groundless anticipations."

The specific conditions discussed by the authors in their paper are the bodily symptoms of a mental origin (psychosomatic) that may be associated with filariasis, an infection with any of the various species of filaria, a parasite widely distributed but particularly common in tropical countries. The parasite may produce an infection of the lymph glands, causing their enlargement and an inflammatory swelling of the parts affected. The scrotum or sac containing the testes frequently is involved.

In opening their discussion of the subject, the two physicians say that "Prosecution of the war in tropical climates has not only stimulated

interest in parasitology and tropical medicine but also, coincidentally, ramified the field of psychosomatic medicine. Diseases which only a few years ago were labeled 'rare and exotic' are beginning to rival the more familiar illnesses for preferential medical consideration.

"Many observers have noticed the mood disturbance associated with the acute phases of tropical parasitic infestation. Particularly is this true of filariasis. As with all systematic infections, there are fatigue, irritability, mild depression and anxiety. However, in addition there is a pervading element of apprehension and concern in the case of white troops which is absent in the infested native population. The cause of this is obvious on inquiry into the setting and circumstances in which this disease has occurred in the members of the armed forces.

"The great majority of troops stationed in the South Pacific islands are young unmarried men. This military duty in the tropics has been for most of them a first experience away from their immediate home surroundings. For the vast majority this is the first time they have been outside the continental United States. Therefore it is natural that the circumstances, since they are conducive to pronounced feelings of insecurity, constitute a maximal test of their adaptability.

"The life soldiers lead in the tropical jungles of the Pacific islands predisposes them to the disruption of the feeling of affiliation which is essential for their personal and social security. The omnipresent threat of attack is an added disturbance, and the contrast between the primitive setting and the terrifying technics of warfare is all the more disturbing. This is the background on which is elaborated the psychologic factors of the various tropical diseases to which they are susceptible. They have been prepared for some of these anxiety laden situations by their military training and indoctrination courses as well as by the reassurance and support afforded by a strong group morale. Then, too, new and vastly different experiences have the effect of absorbing tension and of expending anxiety by their novelty and intrigue. Moving pictures mail familiar recreational activities and newly formed friendships help to dilute a nostalgia which is natural and which must be considered appropriate. . . .

"It has been widely appreciated in this war that with operations being conducted in African, Asiatic and Pacific theaters the problems incident to cultural and environmental contacts would play an important role. Fuller information concerning the peoples, customs and indigenous diseases of these areas is now generally appreciated more than ever before. Despite this, there are still many strange beliefs concerning them and their possible effect on the troops on duty with or near them. Bugaboos and superstitions still distort the thinking of many, exaggerating their fears and perverting their judgments. Particularly is this true of the beliefs concerning tropical disease and the responsibility of the native population for their dissemination. Not only is the public perplexed, but also, much too frequently, the medical profession is uninformed about their cause, nature, complications and sequelae. The result is that emotional symptoms are associated with these diseases and are little understood. The status of military operations in the South Pacific theater is such that the threat of widespread tropical disease is now being restrained by adequate sanitary and prophylactic measures of mosquito control. The psychologic overemphasis which is given to the sequelae of tropical disease can be minimized in a similar manner by equally intensive education of all troops on duty in endemic areas. Fortified by authentic information, infested individuals will be better able to cope with the problems which arise from the need to explain their disease. . . ."

The authors explain that mosquitoes serve as the intermediate host of filariasis and two species are predominantly responsible for its transmission. Fear of deformity, impotence, sterility and ostracism are common reactions among soldiers and sailors and must be combated.

"The medical officer is in an ideal position to render this valuable service," the two navy physicians say. "He is known to the men, he has had the opportunity to demonstrate his technical competence and he is serving with them, sharing their hardships and experiences. In addition to group talks, individual discussions of particular problems with men who have contracted the disease will in a large degree obviate their 'flight into nonorganic symptoms.'"

# Industrial Health

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## EMPLOYING THE HANDICAPPED

Our section in this issue is devoted to the worthy cause of the employment of the handicapped. This is a subject of vital importance to physicians and employers in addition to its broad humanitarian aspects and its far-reaching social implications.

Due to the manpower shortage, the handicapped are being employed today as never before. Already many soldiers and sailors are being discharged from the armed forces, having both service-connected and nonservice-connected disabilities, who require rehabilitation and placement. This influx of disabled men from the armed forces will gradually grow to a tremendous volume. The time is ripe to pave the way for their absorption into industry. It is estimated that of some five million cripples in the United States, about seventy-five per cent are employable.

It has conservatively estimated that between 2,500,000 and 3,000,000 persons in the United States have physical limitations of sufficient severity to become a factor in occupational adjustment. About two out of every one hundred persons in the country have a permanent orthopedic impairment serious enough to be considered crippled, deformed, or paralyzed. There are about 133,000 blind in the United States and 425,000 who are blind in one eye. There are approximately 65,000 persons who are totally deaf, 60,000 deaf mutes, and about 1,500,000 who are hard of hearing.*

Essential factors in the placement of the handicapped consists of:

1. Proper evaluation of physical requirements of the positions as determined by job analysis of physical fitness factors.
2. Proper coordination of training, recruitment, and placement programs.
3. A genuine interest in "selling" the applicant's qualifications to the employer.
4. Proper coordination between the medical service of the commission, which is the recruiting agency for the federal government, and the appointing officials of the operating agencies of their medical and safety advisers.*

Illinois is instituting a program for rehabilitation and vocational training through a committee appointed by Governor Dwight H. Green. Dr. Roland R. Cross, Director of the Department of Public Health is a member of this committee. Further details of this committee is presented in an accompanying article. In Chicago the Illinois Association for the Crippled is fulfilling a most valuable function in connection with handicapped workers either directly or referred through the U. S. Employment Service. In the Chicago area since October 1, 1942, 4063 handicapped persons have registered with the U. S. Employment Service, 1306 in January, 1943 alone.

Employers are showing definite interest by indicating what types of jobs they have open and what type of handicapped individuals they can use. About 15,000 people register with the U. S. Employment Service in Chicago each month: of this number approximately one per cent is handicapped. Placements of the handicapped people average about two per cent of the total although their registration percentage is about eight per cent, indicating that this available source is not being fully utilized. It has been estimated that for the year 1942, approximately sixty thousand handicapped were placed in industry throughout the country.

Recently the permanent branch of the Shut-In Society closed the doors of its upholstery, leather and wood-working shops because thirty out of forty-nine of their regular employees had obtained positions in industry elsewhere.

One of the chief obstacles in employing the handicapped is the compensation law which holds

*Journ. A. M. A., Jan. 9, 1943.

the employer liable for the aggravation of a pre-existing condition. Such laws work a hardship on both the employee and the employer. In several states such as Connecticut, Indiana and Oklahoma, the laws have been modified. Although this legal obstacle is not as formidable as it appears, there are definite instances where considerable risk is incurred in employing certain types of individuals: for example, a man who has a latent osteomyelitis of the leg with a small discharging sinus. A slight blow on this area might cause a flare-up, entailing lengthy hospitalization and loss of time; this blow would probably cause no disability in a man with a normal leg.



Sensitive fingers of the blind find many uses in industry. This man repairs safety glasses. (Caterpillar Tractor Company Photo.)

If the osteomyelitis developed into an active recurrence following such a slight injury, the employer would doubtless be held liable. On the other hand, most employers are unduly fearful of the medicolegal implications because there are ample statistics to show that most handicapped workers do not present any additional hazard or drawback.

The following articles give general information as to past and present experiences dealing with the very important problem of employing the handicapped.

## WHY WE EMPLOY AGED AND HANDICAPPED WORKERS*

By Edsel Ford

War at the combat line brooks no infirmities in men. The soldier in a plane, a tank or a fox hole must be a thoroughly sound and sturdy physical being. But at home on the production line that bulwarks the fighting front, we are rapidly discovering that the physically handicapped man may be a splendid production soldier.

A good many firms in this country have always known that individuals impaired physically in some respect frequently have perfectly adequate capabilities for some jobs. Indeed the loss or impairment of a sense or limb is often compensated for by increased abilities with remaining senses or limbs. Now, under the prompting of a manpower pinch, recognition of the usefulness of the physically handicapped is spreading to all the country's industries and services. The lame, the halt and the blind are provided with a widening field for war-time contribution.

Our company is one of those which have for a long time believed in and practiced the utilization of physically impaired workers. Today we employ 1208 totally or partially blind men. All but two of them were sightless when they came seeking work — and found it. One hundred and eleven of our employees are deaf mutes. There are, in addition, 135 who suffer from epilepsy; 91 with but one arm; 3 with both arms amputated; 260 with one arm crippled; 157 with one leg amputated; 101 others suffering from crippled condition of the legs; 10 with both legs amputated; 139 with spine curvatures; 322 with organic heart ailments. All together, 11,163 men in various stages of disability are receiving full pay. The blind men, for example, receive from 95 cents to $1.15 an hour. These figures are for the River Rouge industrial area.

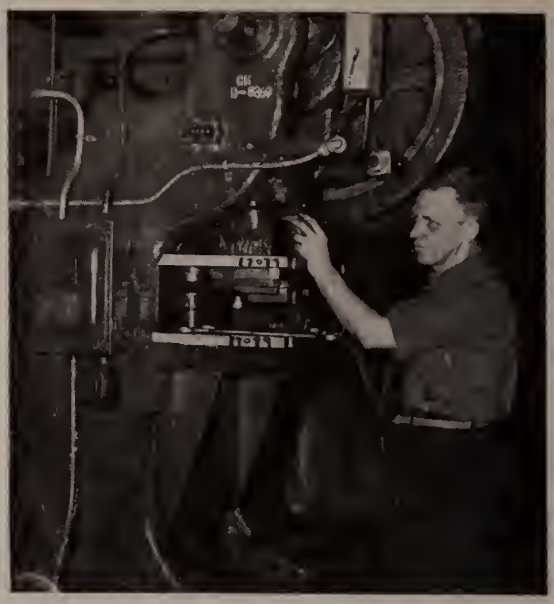
One of these sightless men has been with the company for twenty-four years, and is now seventy-four. Let him speak of the hopelessness of outlook which overwhelmed him twenty-five years ago, after an operation for glaucoma had left him blind.

"I was almost fifty then," he said. "The house was partially paid for. One of the kids was trying to make his way through college, but with the hospital expenses it looked as if things had come to a stop. No one will ever know — unless he has been through it himself — what the employment manager really said to me when he told me to 'report Monday'. He told me I was still useful to

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Only one arm is normal, but this Ford Motor Company workman uses it to fullest advantage in the war effort. He is inspecting aircraft engine parts with a visual gage. (Photo from Ford News Bureau.)



This machine mechanic is blind. Before coming to Ford Motor Company to engage in war work he was recognized as one of the best automobile mechanics in his community. (Photo from Ford News Bureau.)

this world and to myself; that I could mix with my fellow men on some basis of equality. I felt that I had conquered a great burden and that there was future happiness for me and those close to me."

This man's early pessimism was unwarranted. So, also, his gratitude although flattering to us, is unduly enlarged. No company regards such employment as charity or altruism. All our handicapped workers give full value for their wages, and their tasks are carried out with absolutely no allowances or special considerations. Our real assistance to them has been merely the discovery of tasks which would develop their usefulness.

Their fellow workers are highly co-operative. When a handicapped person is engaged, it is usual practice to ask those other workers living in his vicinity who drive to and from work to provide assistance in transportation. Responses to such requests are, usually, overwhelming.

Although more than 10 per cent of all men employed in the River Rouge industrial area are physically handicapped in some way, we have for many years been more concerned with a universal physical impairment — namely, old age. Today, more than 45 per cent of these workers are more than forty years of age. More than 27 per cent are more than fifty. Hundreds are in their seventies, and seven workers are in their eighties.

Long ago we came to the conclusion that age as a factor in employment had been overemphasized, and in that belief an experiment was undertaken which has since justified all our hopes for it. A survey was made showing how many persons there were at each age level in communities where Ford plants are operated. On the basis of the survey findings, an employment policy which reflects the age groupings was established. This policy also takes into consideration the advancing age median of the nation and the similarily advancing percentage of older employees in the nation's total employment roll. Where in 1900 only 23 per cent of the nation's employees were between the ages of forty and sixty-five, today 37 per cent are in that age group. As we have previously pointed out, the number of those in our company above forty is appreciably higher than the average.

The harnessing of greater and greater mechanical horsepower has permitted the average age of industrial workers to rise rapidly in the last few forty years. Simultaneously, per-man efficiency has risen even more rapidly. A young man may be required to push or pull a heavily laden hand truck through a plant. But a man of sixty can operate an electric tractor which will pull a dozen laden trucks. All he needs to do is to steer it and pull a lever. It is not even as strenuous as driving an automobile.

No one feels that men of sixty or even seventy



This legless Negro youth has a special cart on which he travels about the Ford Motor Company plant — upstairs, down and aboard busses — without assistance. He assembles aircraft engine parts. (Photo from Ford News Bureau.)

and eighty are too old to drive cars. And as long as a man has the judgment and ability to drive an automobile, he has the judgment and ability to operate an industrial machine. It may be true that the older men are not so fast nor so strong as those in the twenty to thirty-group, but this is more than offset by their experience, their cooler, more mature thinking and their accuracy.

The will to work continues strong in many of these older men. One eighty-year-old employee has been operating an elevator in one of our plants for twenty years. By the elevator was a chair, and he'd sit down when he got tired. His day was enlivened by the conversation with his passengers.

The elevator, however, was an old type, built to handle heavy freight and operated by a hand-pulled cable. A department head decided this was too much of a job for a man in his eighties, and asked that the veteran be transferred to an easier job. But the old fellow objected. If he was moved, he said, he would not only lose the friendly contacts which had come to mean so much but it would constitute an admission that he must be slipping — and he didn't think he was.

The result: The type of control on the elevator was changed and he's still running it.

Within another few years the median age in the United States for all living persons will be probably about forty-one or forty-two — in other words, there will be as many persons over that age as under it. Industry must make up its mind now that it is going to emphasize the employment of those persons in the forty-and-upwards group, or else the younger people will have to support their elders and themselves. That merely will aggravate the situation, for it will mean that persons will be marrying later in life and be in their middle years before the period of accumulation occurs.

Economically, it is more sound to keep able-bodied men and women earning incomes and buying goods than to place arbitrary age barriers and permit them to lapse, beyond these barriers, into senility and inaction, which is not only unfortunate but economically costly. As a matter of fact, men grow old not so much by the passage of time as by the shadow of hopelessness, the conviction of uselessness. Those who look forward to tomorrow's constructive activity have no time to grow feeble.

No man is hopeless or helpless as long as he has the will to do and his fellow men give him a helping hand. Courage is not a matter of age or physical condition.

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## MANPOWER SHORTAGE RELIEVED BY USE OF AFFLICTED WORKERS*

Determined to make the fullest use of manpower for warpower, American industry not only is making jobs for the crippled, the blind, the afflicted and the aged, with excellent results, but, in some instances, is going a step further by helping prospective employees correct their physical defects so they can take war jobs, an investigation by the National Association of Manufacturers reveals.

The NAM has made inquiries to learn what war plants are doing to make use of physically handicapped persons and to restore present or prospective workers to health so they can take their places on the nation's assembly lines. Results of the investigation indicate that employers who have not yet utilized this source of labor might do well to consider it as a possibility for alleviating the critical manpower shortage problem.

Experiences of the plants that have experimented in rehabilitation of prospective workers *before* employment also would indicate that many useful workers may be reclaimed through this type of activity.

Only 45 representative plants — ranging all the way from soup and shoe factories to plane plants, machine and gunshops — that answered the NAM'S query, only eight reported

*From the Industrial Relations Bulletin of the National Ass'n. of Manufacturers.

they had not yet tapped physically-handicapped labor as a source of manpower. Thirty-five reported that they are doing something in the field of rehabilitation with good results, while two other companies said they are considering such programs.

Of the 35 making positive answers, 16 said they have definite policies of rehabilitating employees who become sick or injured on the job. One of these companies even maintains a health farm for its disabled employees. Nine have definite programs of providing lighter work for those who become injured, ill or aged on the job.

Five companies reported they make it a policy to advise likely prospects how to correct physical defects so they can take war jobs. Case histories were reported on how persons suffering from faulty vision, tuberculosis, dermatitis, tumors, kidney conditions, hernia and even social diseases were put to work after following advice to seek medical treatment.

About half of the companies said they employ persons with physical handicaps of various types. Some of the handicaps mentioned were blindness, deafness, disability resulting from infantile paralysis, loss of limbs and eyes, hernia and other afflictions. One plant maintains a school for training the physically handicapped.

Six of the companies mentioned they have definite policies of cooperating with state rehabilitation agencies for placement of handicapped persons. A number of the companies volunteered the information (although the question wasn't asked in the NAM query) that they have adopted definite policies of fitting preplacement examinations and standards of physical fitness to specific types of employment. It is a matter of common knowledge in industry that this practice has become prevalent as a war measure.

As a graphic illustration of how some plants are interesting themselves in rehabilitation, the personnel director of a large Eastern company told the story of a young Ph.D. in chemistry. The young man was sent to the plant by a university to do research work. The company doctor discovered he was suffering from a hernia, dermatitis that some doctors had pronounced "incurable" and a serious vision defect that made him practically blind in one eye.

The case seemed hopeless, but the company wanted to place the young chemist in a useful war job, so he was sent to various specialists for corrective treatment.

"At the end of a month," the personnel director related, "he was in better health than ever before, and he was able to undertake his duties with fresh enthusiasm and vigor and without danger to himself or to his fellow employees."

This same company official, who keeps in close touch with Eastern employment problems, added physical rehabilitation of men needed both by the armed forces and by industry was a serious problem, and that "literally millions" are being kept out of the armed forces and industry "because of remedial physical defects."

A few firms — his among them — have adopted the policy of "offering cooperation with the local medical and hospital services to enable the applicant to fit himself for appropriate employment," he pointed out, adding:

"There are literally several thousands of such cases presenting themselves daily at the employment offices of various corporations, as well as at the recruiting offices of the Army and Navy, who could be helped back to complete health by prompt and effective medical and hospital service."

An automobile manufacturer, who spends hundreds of thousands of dollars annually on plant medical programs, has stated these programs are "all the more important during the present national emergency when the nation is facing a serious drain on its manpower." It adds it is "just as important" for war workers to keep fit as it is for fighting men in combat services.

From this company's files comes the story of an 18-year-old boy who applied for a job at one of its Eastern plants.

"A large tumor mass was found in his shoulder." the report stated. "He was not hired but an operation was advised. He had the operation and four weeks later went to work for us."

There is also a great deal of work being carried ont to rehabilitate empolyees who have recovered from tuberculosis. Plant doctors take X-rays of such employees every three months in order to keep a regular check on their progress.

The concern has also made jobs for cripples, blind persons and sufferers from heart ailments. Of the latter, they report: "Perhaps the most striking examples of employees who have been rehabilitated are those who have developed defects of the heart. . . . One who has recovered from a serious heart ailment may be seriously physically handicapped and he must be employed under conditions that will not aggravate it. . . . We have many heart cases working in suitable occupations throughout the plant. They are under the supervision of the medical department and report for periodic examinations as often as we think necessary. We operate under the belief that it is best for these folks to be kept on suitable gainful occupations, and, while they are so occupied, we cooperate with their family physician, supervising their work activities and their physical conditions."

Another prominent war contractor reported that "in the last two years we have altered the

physical standards that an applicant must have to secure employment," thus resulting in employment of a number of persons who previously were excluded from participation in the war effort. A company medical executive reported that they give a good deal of pre-employment advice concerning the correction of hernia and faulty vision.

"By a selective system of job placements we put the 'sub-standard' employees in positions where they can do an efficient day's work without endangering themselves or other employees," an official reported.

A South Carolina manufacturer reported: We have had an excellent health program in our plant for some time and we require physical examinations before we put applicants to work. We also talk frankly with applicants that we reject and we make recommendation to them as to the things they can do.

"For example, we suggest that they get glasses to correct vision for inspection jobs and many other items which are too numerous to mention. By talking frankly with applicants and getting them to keep in constant touch with their doctor, we are able to get a good many people to work who otherwise would not be able to do so."

A leading aircraft producer on the West Coast, at a recent date had 13 blind persons — 11 men and 2 women — working on the assembly lines where fighter planes and huge bombers are produced, and, by this time, probably has increased that number.

"These 13 are pace-setters," the company said. "Without exception, they have stimulated the sighted people around them into increased production."

The blind persons were employed through cooperation of a nearby blind training school. First they were put through a month's placement test, in which they proved that, in certain jobs, they could more than hold their own against sighted workers.

The 13 people are accompanied to work each morning by five seeing-eye dogs — Ginger, Pepper, Queenie, Curley and Alda. The dogs stay on guard faithfully at the feet of their blind masters.

The attitude of the blind persons who have been given useful employment at this plant is summed up by one of them, Charles A. Kime, who installs riv-nuts for de-icing boots in the "Lighting" fighters.

"Life," Kime said, "seems very good".

A New England arms plant has a blind man employed as an inspector and a factory official commented his skill is "unbelievable." A New Jersey manufacturer employs blind men and women for the gauging of mica spacers used on condensers for tank and airplane motors, and reports their work is far above the average for normal people performing the same operations.

Another large Eastern plant is employing physically handicapped persons wherever possible. It is among the numerous Pennsylvania plants cooperating with the State Bureau of Rehabilitation, which, with this aid from industry, is able to place more than 800 young handicapped persons a year in war work.

The drafting rooms of its Transformer Division was cited as an example of how the company is cooperating. The persons were put to work as draftsmen, and the results were excellent. In fact, the company reported, "one of the young men made the highest grades in aptitude tests in a group of 96 of our drafting apprentices."

A manufacturing chemist, rehabilitates employees injured in line of work, and also cooperates with family physicians or outside institutions in health problems affecting workers.

Another firm that cooperates with State rehabilitation agencies is a leading shoe manufacturer in New York State, which reported that "we have always felt that, on work where the disability did not interfere with the particular duties assigned a handicapped person, we would just as soon hire a physically handicapped person as one who is not. Our experience with them has been satisfactory."

Highly satisfactory experience with the employment of deaf mutes was reported by a well-known paper company which has one division in which eight per cent of the 550 employees can neither speak nor hear.

"Our experience with these men has been highly satisfactory over a period of years," a company official stated, "and, while the training program is more complicated and cumbersome than the program set up for normal individuals, we find these afflicted individuals highly intelligent. As a result, we have been able to up-grade many of them at a fairly rapid rate."

A producer of machinery and tools in New England cooperates with the State Department of Labor in employment of handicapped persons. In its messenger department alone, it has taken on 27 persons with various degrees of physical disability.

"These disabilities," a company official reported, "range from arms amputated at the shoulder, to those with crippled hands and arms, those suffering from shell shock, and those disabled by the ravages of infantile paralysis." He added some of them have been employed for a long time, and that "we always have looked with a great deal of pride upon our handicapped employees."

The same company also employs 15 deaf mutes, one of whom has been with the company



A valuable worker, despite his crippled legs. (Caterpillar Tractor Company Photo.)

for more than 50 years. "These people are among our most able and respected employees," the company official said.

The concern also has a policy of providing new and suitable work for any employees who may be injured in the shop.

One Eastern company has gone all-out in its effort to get workers to help it fill war contracts. It has taken on one-legged men, others "so badly crippled that they must sit down for work at all times," men without fingers, men with hernia and men in their 70's. The company even has adopted a policy of hiring men "who may be suffering from the social diseases if they are at such a stage that treatment will cure them, and if the prospective employee will agree to faithfully follow such treatment under the supervision of our company doctor."

"But they must follow our physician's instructions religiously," a company official said. "Any diversion makes the employee subject to dismissal."

An oil company, which has adopted a policy of doing all it can for sick, injured or aged employees, made a company-wide survey and discovered 166 jobs that could be filled by incapacitated workers.

An Iowa war contractor has designated 21 of its 239 hourly paid jobs as "jobs for less able-bodied persons," and it reserves these for employees who become injured or aged on the job.

A mid-western company reported it has been able to use a number of physically handicapped persons through "some relaxation in our physical standards and careful selectivity in applying the handicapped man to a job which he can do."

Expert surgeons have been called in by an important glass manufacturer to help restore injured employees to usefulness. A company official reported many employees, who were seemingly hopelessly crippled, have been rehabilitated through skillful medical attention and thus were able to reinstate themselves as competent wage-earners.

Another paper company which has mills in three states is making excellent use of men past 70. The editor of the company's employee publication reportetd that, as of a recent date, there were 34 "oldsters" on the job. Ten were 70; ten were 71; four were 72; three were 73; one was 75; four were 76; one was 77, and the "granddaddy" of them all was 88.

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A FEW SUGGESTED JOBS FOR AFFLICTED PERSONS

Persons with Amputation of One Arm
- Electrician and Inspector
- Master Mechanic
- Foreman
- Clerical Checker
- Machine Operator
- Stockman, Storekeeper
- Watchman, Guard, Policeman
- General Inspector

Persons with Amputation of One Leg
- Grinder and Polisher
- Ordnance Man
- Toolmaker
- Welder, gas and electric
- Cutter
- General Inspector
- Draftsman and Apprentice
- Punch Machine Operator
- Planer Machine Operator
- Machinist, many types
- Patternmaker
- Carpenter Shop
- Foreman

Persons Blind in One or Impaired Activity in Both Eyes
- Pipe Fitter Shop
- Rope Maker
- Shipfitter
- Toolmaker
- Blacksmith
- Inspector
- Chipper Foundry
- Coppersmith

Some Positions Suitable for the Deaf
- Blacksmith
- Boilermaker Shop
- Forger, Light, Heavy and Drop
- Furnaceman
- Loftsman
- Sheetmetal Worker Shop
- Spot Welder
- Shipfitter
- Riveter

Punch Machine Operator
Drill Press Operator
Patternmaker
Draftsman, Apprentice and Principle
Grinder, Surface, Internal, Dish and Cylindrical
Welder, Gas and Electric
Optical Parts Inspector
Toolmaker
Sheetmetal Worker
Machine Operator
Polisher
Set-up Man
Carpenter

Persons with Organic Heart Diseases Fully Compensated
Ordnanceman
Welder, Gas or Electric Shops
Inspector
Layout Man
Draftsman
Glass Grinder and Polisher
Operator, Power Sewing Machines
Optical Instrument Assembler and Finisher
Painter
Sheetmetal Worker
Welder, Gas
Storekeeper, Stockman
Instrument maker

Persons with History of Tuberculosis
Carpenter
Loftsman
Shearer
Sheetmetal Worker
Layout Man
Watchman
Machinist
Electrician
Optical Instrument Maker and Assembler
Toolmaker

Editor's Note: There are approximately 133,000 totally blind and upwards of 425,000 persons blind in one eye in the United States. An estimated 65,000 are totally deaf, 60,000 are mutes and 1,547,000 are classified as hard-of-hearing. Approximately 3,700,000 suffer a cardiac condition and 680,000 have tuberculosis, according to recent estimates, while 2,500,000 persons in the United States are afflicted with orthopedic handicaps.

## STATE PROGRAM FOR REHABILITATING WAR VETERANS

On February 9, 1943, Governor Dwight H. Green created the Governor's Committee on Veterans' Rehabilitation and Employment, which consisted of the following members:

Governor Dwight H. Green, *Chairman.*

James P. Ringley, Past State Commander American Legion, *Vice-Chairman.*

Frank H. Thompson, Director of Registration and Education, *Executive Officer.*

Guy E. Bonney, Superintendent of Veterans' Service, *Secretary.*

Vernon L. Nickell, Superintendent of Public Instruction;

Rodney H. Brandon, Director of Public Welfare;

Roland R. Cross, M. D., Director of Public Health;

Howard Leonard, Director of Agriculture;

Francis B. Murphy, Director of Labor;

William McCauley, Past State Commander of the American Legion and Chairman of the American Legion Rehabilitation Commission.

With the establishment of this committee, the Governor stated: "Illinois is faced with an urgent and very grave responsibility. In the short time we have been at war, many thousands of men from this State have been honorably discharged from the armed forces by reason of mental or physical disability and returned to this State as a responsibility of the State Government due to the fact that they are not eligible for treatment and training by the Veterans' Administration at Federal expense. The reasonable expectancy is that thousands more will be so returned to this State during the continuance of the war for the same reasons. To these men who have suffered physical loss or mental impairment while in patriotic discharge of their duties as members of the nation's armed forces, the State of Illinois owes a solemn duty. The maximum facilities and resources of the State must be made available and utilized in a coordinated and an efficient program of rehabilitation. Those who have sustained physical injury to an extent which closes to them avenues of employment for which they were fitted prior to such injury must be guided and taught new vocations of responsible character in order that they may again become self-reliant and independent individuals. Of those who have incurred mental illness, a very great percentage can be restored to normalcy by the application of medical and psychiatric treatment and thus be enabled to resume again their rightful place in society."

The responsibility of the Committee is to direct and supervise the coordination of the functions of existing state agencies, and facilities and resources of the State, in the development of a program for the rehabilitation of returned veterans. The specific objectives of the program, as outlined by the Governor, are substantially as follows:

1. The thorough examination of returned veterans in order to determine the nature and extent of medical or psychiatric treatment necessary to attain the highest degree of physical and mental rehabilitation, and the application of such treatment.

2. The utilization of psychiatric or psychological procedures to determine, from a long range viewpoint, the nature of employment most suitable for the proper social and economic readjustment of the patient.

3. The extension of the vocational rehabilitation program to the end that the great majority of these men can be fitted into commerce, industry, or agriculture within a reasonable period.

4. Supplemental to objective number 3, the

utilization of the State's employment program for the rapid assimilation of such veterans as do not require additional training or service.

5. Reasonable follow-up or after supervision, whenever necessary, until such time as the veteran has demonstrated ability to suceed on his own initiative.

The part to be performed by the Illinois State Department of Public Health in this program will be to determine in each instance whether the U. S. Veterans' facility will assume responsibility for the individual so far as medical or surgical care is concerned; and, if not, the Department proposes to arrange for such care through the physician of the veteran's choice.

A fixed fee schedule for medical service that may be needed in any case has been prepared, submitted to and approved by the Council of the Illinois State Medical Society.

Dr. Herman Cole of Springfield has been appointed to oversee the State-wide medical service. Among his duties and responsibilities will be the review of applications for medical and hospital care, the authorization of such care when indicated in eligible cases and the review of statements rendered by physicians and hospitals for services performed in accordance with authorizations. He will work in close cooperation with the staff in general charge of the rehabilitation program.

The department of Public Health has had assurance from several industrial surgeons that will recommend the employment of such rehabilitated persons wherever practical.

Every man and woman who can be rehabilitated through this program and placed in a productive position will add that much toward meeting the almost desperate man-power shortage. It is anticipated that the total results of the program in Illinois will be of tremendous value and benefit to the individuals and at the same time a patriotic service of considerable magnitude.

## INDUSTRIAL HEALTH MEETING FOLLOWS MEDICAL EDUCATION CONGRESS

"The sixth Annual Congress on Industrial Health (sponsored by the Council on Industrial Health of the American Medical Association) will take place on Feb. 15 and 16, 1944 at the Palmer House in Chicago," *The Journal* of the Association announces in its December 25 issue. "Those who expect to attend are urged to make travel and hotel reservations at their earliest convenience. These sessions follow directly after those of the Annual Congress on Medical Education and Licensure. The deans of medical schools and others interested in medical education may find it possible to attend the sessions on industrial health; a special effort will be made to induce them to do so. Official representatives of medical societies and allied organizations can attend both congresses this year without extra travel.

"One of the great obstacles to the growth of industrial medical service has been the slow development of public interest in the health and economic benefits which the physicians can bring to the industrial organization. The Congress on Industrial Health, therefore, will attempt to attract greater interest from management and labor. Prominent representatives of these groups will be asked to participate.

"Interest in the physical welfare of the working population must be maintained even after the stimulus of wartime production is over. This element in postwar planning must be encouraged. The sessions of the sixth Annual Congress on Industrial Health will attempt to bring this relationship into proper focus. The congress will also emphasize the importance of physical restoration, retraining and reemployment of the disable, an issue which is certain to be a source of medical preoccupation for some years to come.

"Industrial health is gradually assuming greater and greater importance as an avenue for the distribution of medical service. Every physician and medical organization should recognize the trend so that the movement may be guided along dependable scientific and educational lines."

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Ah! what would the world be to us
If the children were no more?
We should dread the desert behind us
Worse than the dark before.

—Longfellow.

# News of the State

## PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

C. G. Johnson of Galesburg, physician and surgeon for more than half a century was awarded the Fifty Year Certificate of the Illinois State Medical Society and was admitted to the Fifty Year Club of the Society. Dr. Johnson was first licensed to practice in 1893 and has engaged in practice since, mainly in the Galesburg area. Formal presentation of the certificate was made at the meeting of the Knox County Medical Society held in the Custer Hotel. The presentation address was made by Dr. Charles P. Blair of Monmouth. Dr. Harold M. Camp talked on Post-War Medical Planning. Dr. Johnson was 78 years old on January 5 and plans to return to his office as soon as he has fully recovered from a fractured leg.

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The Chicago Sunday Tribune of January 2nd carried a story concerning the building of modern American hospital out of an African village. The story was obtained from a letter written by Lt. Col. M. Herbert Barker to Dr. Irving S. Cutter. It told how the 700 corpsmen, nurses, and doctors attached to the Northwestern unit scraped the accumulated filth of 25 years from homes on the twisted terraces and slopes of an African village to fashion a 1,980 bed hospital for American soldiers. "It is safe to say that the American soldier is receiving as good medical care here as he might receive at home", Col. Barker wrote. "Our staff rapidly found out that one important feature of our work was to make a soldier feel at home and substitute as far as possible for home and mother. The nurses were angels in this respect."

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### CHICAGOAN GETS MEDICAL AWARD FOR ANESTHETIC

Dr. Arno B. Luckhardt, 5216 Greenwood av., professor of physiology at the University of Chicago, received the 1943 Callahan Memorial Award for accomplishment in the field of medical research for his discovery of ethylene gas as an anesthetic. The presentation was made by the Ohio State Dental Society.

Dr. Luckhardt discovered the anesthetic use of ethylene in 1923 when he found hothouse roses turned yellow if that gas was present in the heating system. Experimenting, he was able to anesthetize frogs, dogs and finally people with ethylene. The gas proved neither injurious nor dangerous to human life and caused no strain or nauseating after affects.

Dr. Luckhardt refused an offer of more than $100,000 for the patent right to ethylene. Recently the University of Chicago adopted a rule providing that there shall be no profit from exploitation of such discoveries through patents.

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The Twelfth Annual Meeting of the American Academy of Orthopaedic Surgeons will be held at the Palmer House in Chicago January 22 to 26, 1944, inclusive. The program will be presented by specialists from all over the country and representatives of the Army and Navy.

Martin Heidgen, formerly Superintendent of Elmhurst Hospital has been invalided back to the States after seeing active service in the Southwest Pacific with the West Suburban Hospital Unit.

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Willard O. Thompson, Professor of Medicine, (Rush) University of Illinois College of Medicine addressed the Du Page County Medical Society on the evening of January 19th, at the Elmhurst Community Hospital. His subject was "*Endocrine* Therapy."

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## MARRIAGES

Arthur N. Kitenplon to Mrs. Elsie Jefferys, both of Aurora, Ill., October 12.

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## DEATHS

John Ralph Ballinger, Chicago; Rush Medical College, 1900; studied also at Johns Hopkins University and in Berlin, Vienna and London. Was professor of neurology at the University of Illinois. At the time of his death he was on the staff of the Lutheran Deaconess and Norwegian-American Hospitals. Was a member of the medico-legal committee of the Illinois State Medical Society. Died in Atchison, Kansas, December 29, 1943 at the age of 68.

F. S. Joseph Bessette, Chicago; Rush Medical College, 1889. Had practiced medicine in Chicago 54 years. Died in Mercy Hospital, December 25, 1943 at the age of 78 years.

Tracy W. Blachley, Chicago; Northwestern University Medical School, 1907. Professor of proctology and gynecology at Chicago Medical School; on staff of Illinois Masonic Hospital; served in medical corps in World War 1. Died December 21, 1943 at the age of 67.

Charles H. Brobst, Peoria; Medico-Chirurgical College of Philadelphia, 1888. Had retired from practice in June, 1942. Was ophthalmologist in Peoria for many years. Died November 25, 1943 at the age of 79.

Clement W. K. Briggs, Chicago; National Medical University of Chicago, 1906. Died in Columbus Memorial Hospital December 22, 1943 at the age of 62.

Samuel D. Carrigan, Sandoval; St. Louis University School of Medicine, 1905. Had practiced medicine in Sandoval for 40 years. Died after a paralytic stroke November 12, 1943 at the age of 64.

Charles P. Chaffin, Chicago; Dearborn Medical College, 1906. Died December 4, 1943 at the age of 69.

Capt. Frederic F. De Metrovich, formerly of Chicago; University of Colorado School of Medicine, 1934. Was instructor in pediatrics at Northwestern University and on the staff Children's Memorial Hospital and on courtesy staff at Evanston Hospital. Enlisted in the army in Oct. 1942 and was sent to Australia. Died of malaria in New Guinea Nov. 21, 1943 at the age of 35.

John William Daugherty, Chillicothe; Rush Medical College, 1900. Taken ill several weeks ago and died in St. Francis Hospital, Peoria, following an operation, November 30, 1943 at the age of 69.

William Burns Donaldson, Polo; Northwestern University Medical School, 1882. Had practiced in Polo since 1885 until his retirement a year ago. Died December 19, 1943 at the age of 90.

Edwin L. Draper, Champaign; Harvard Medical School, 1907. Was a major in World War 1, stationed with base hospital 33 and saw service in England and France. Had practiced medicine in Champaign since 1919. Died suddenly November 30, 1943 at the age of 61.

Archibald Edward Freer, Chicago, retired; Rush Medical College, 1891. Practiced medicine in Chicago briefly after completing studies in Heidelberg, Germany. Died November 29, 1943 at the age of 81 years.

Harold Woodworth Graber, Chicago; Northwestern University Medical School, Chicago, 1926; served during World War I; assistant chief surgeon, Rock Island Railroad; died in the Veterans Administration Facility, Hines, October 17, aged 51, of heart disease and cerebral hemorrhage.

John William Hanshus, Chicago; University of Illinois College of Physicians and Surgeons, 1901. Died November 26, 1943 at the age of 72.

Luther Anderson Hedges, Kankakee, formerly of Watseka; Chicago College of Medicine and Surgery, 1909. Practiced medicine in Crescent City from 1916 to 1928 when he moved to Watseka. Lived there until three years ago when he was employed on the staff of the Illinois State Hospital at Kankakee. Died November 15, 1943 at the age of 68.

Henry E. Irish, Chicago; University of Illinois College of Physicians and Surgeons, 1901. Was professor emeritus of pediatrics at the University of Illinois and attending physician at the University and Cook County Hospitals. Died following a heart attack on December 9, 1943 at the age of 66.

James William McLaughlin, Rossville, retired; Ensworth Medical College, St. Joseph, Mo., 1893. Practiced medicine in Ohio for 50 years. Died December 6, 1943 at the age of 76.

John J. McShane, Springfield; Rush Medical College, 1903. Was Chief of the Division of Communicable Diseases of Illinois State Department of Public Health since 1917. Died following an illness of a few days December 14, 1943 at the age of 65.

Thomas W. Rennie, Chicago; Chicago College of

Medicine and Surgery, 1917. Died in Hines Memorial Hospital November 29, 1943 at the age of 69.

Clinton Francis Rife, Naperville, Ill.; Rush Medical College, Chicago, 1894; formerly a medical missionary; died November 22, aged 76.

Charles W. Ritter, McLean; Washington University School of Medicine, St. Louis, 1900. Had been in ill health for a year and had retired from active practice. Died following a series of strokes December 5, 1943 at the age of 67.

Daniel A. Simmons, Roseville; University of Illinois College of Medicine, 1929. Had practiced medicine in Warren County for 11 years. Died following an operation, November 18, 1943 at the age of 39.

MacCormick Smetters, Waverly, Ill.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1898; Rush Medical College, Chicago, 1900; member of the Medical Association of Montana; died in St. John's Hospital, Springfield, October 19, aged 66, of carcinoma of the prostate with metastases and secondary anemia.

Augusta W. Tarr, Johnston City; Barnes Medical College, St. Louis, 1898. Had practiced medicine for 40 years, the last 20 in Johnston City. Died at his home November 23, 1943 at the age of 78.

George Gordon Taylor, Maywood; Northwestern University Medical School, 1902. Practiced medicine many years ago in Michigan. Had engaged in medical court reporting for past many years. Died of a heart ailment November 13, 1943 at the age of 73.

Herman H. Tuttle, Springfield; retired; Keokuk Medical College, Keokuk, 1894. Served in Word War 1 as Lt. Colonel. Was city health superintendent at Springfield for many years. Died December 9, 1943 at the age of 72.

Fritz Carl Yeck, Meredosia, Ill.; Rush Medical College, Chicago, 1903; died August 11, aged 68.

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## BRAIN OPERATIONS PERFORMED WITHOUT DELICATE INSTRUMENTS

Capt. Joseph R. Strauss, formerly of Bridgeport, Conn., according to the Chicago *Daily News,* October 12, is reported to have performed two delicate brain operations within a month, without the usual surgical instruments and without even proper sterilization of equipment, on an American quartermaster corporal and an Australian infantryman. After Japanese bombers struck the base at Tsili Tsili some time ago the Australian infantryman was found unconscious with brain tissue exuding from his right temple. He was in absolute medical shock. After giving him 250 cc. of blood plasma Captain Strauss and his assistant cared for 18 other wounded men and then gave the Australian two more plasma injections. An operating table was then erected made from a stretcher covered by a brown army blanket and held up by four pronged sticks. Light came from three pulsating bulbs suspended from jungle branches and fed by a portable electric generator. Only an intravenous anesthetic was used. Captain Strauss is reported to have stated: "We didn't have enough clamps, and it was cut and tie and cut and tie. We cleaned out the wound as best we could, removing dirt and shrapnel particles; and after packing the wound with sulfa we sewed it up. We put him to bed in a tent. Three of my boys stayed with him all night. They held him when he grew restless. The patient showed no temperature after three days and was sent back from the dressing station to a hospital, where he is now recovered and has all of his reflexes." Details of the other operation were not given in the item. Captain Strauss graduated from Cornell University Medical College in 1935.

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## IN OUR OWN WORLD

Now we and the whole world have learned the folly of over-dependence on the remote coolie lands of the Far Pacific on shipping lanes which no Navy or combination of navies can adequately defend; on greedy cartels which have placed natural rubber, quinine, and other essential products in the hands of self-benefiting groups of non-American companies. The desperate shortages of rubber, quinine, essential oils, tropical fibers and many other war and peace necessities of every home and shop remind us most forcefully that practical efforts to help our nearest American neighbors establish these crops within safe and easy ship, highway, airplane and rail distances of our homes is good business for us, for Middle America and for all the Americas. If a free Western Hemisphere is to survive, the Americas must help each other with pocketbook and plow, with trade and friendly exchange of goods; not merely with noble words. This is a first lessons of our greatest and most crucial war in which all ten nations of Middle America are our allies, providing us with increasing quantities of essential and strategic goods which can no longer be procured from the war-shrouded Pacific tropics. — *Middle America Information Bureau.*

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No nation can be destroyed while it possesses a good home life.—J. G. Holland.

# P. R. N.

The Jocular Jingles of C. G. F.

*by*

*Charles G. Fa..um M. D.*

*Peoria, Ill.*

## SOPHISTES, THE SEER, UTTERETH A NEW YEAR'S SUPPLICATION

O, Sanctus Geronicus, friend and benefactor of those advanced in years, the coming and goings of the seasons bringeth the beginning of another twelve-month and in contriteness of spirit we come to thee for guidance.

Grant us an awareness of our years and an appreciation of what they have bestowed upon us intellectually and spiritually that vastly more than compensate for what they have taken from us physically. Then and then only can we hope to live joyously within our limitations without rancor and without covetousness.

Teach us to dwell more happily with our host of memories and our myriads of experiences and to give more time to meditation and good reading and less thought to physical infirmities.

Spare us that wish of the foolish one, that he might live any of life over again. Only the stupid thinketh he would have made a better job of it and the wise man knoweth that good fortune was as great a factor as his own discernment in making him what he is.

May it be given us that the time will never come when merriment shall not dwell in our soul nor our sense of humor be dimmed.

Spare us, we beseech thee, from the well nigh universal fallacy that the present is not as good as the past and never was. Teach us rather that our tomorrows will be better than our todays and that today surpasseth any yesterday that hath gone before.

Teach us neither to envy youth the vigor that it hath nor to belittle it for the wisdom that it hath not. Time will reduce the one and increase the other.

We implore thee furthermore that we may so live that there shall remain a certain number of good friends — but not too many. For it seemeth that the quality of friends beareth in inverse ratio to the number thereof. And grant us likewise a few vigorous enemies for the furtherance of our self respect.

And above all things, we implore that we may be spared that loathsome thing called respect for old age. If one deserveth not respect for what he hath done or for what he hath become, then we pray that it be omitted, for respect without merit is as sounding brass.

And when finally we float off into oblivian even as the last leaf that leaveth the tree, we ask no more, O, Sanctus Geronicus, than that it shall be said of us, "Life was better because he lived and laughed and worked among us."

## CYNICAL CINQUAINS

**The moth**
**Is very shrewd**
**In choosing winter clothes**
**For only finest wool is chewed**
**He knows.**

**The Futurist Poet takes a dose of Castor Oil.**

## THE WHERENESS OF THE WHY.

Contemplation no yes ad nauseam ricini
Revulsion acid hydrochloric acini
Dumb dub
Gulp glub

Fume fuss
Oesophagus
Epigastrismus regurgitation I me

Borborygmus seismis typhoon paroxysm
Tumultuous Vesuvius Traumatism
Gripe growl
Grunt howl

Who this
Peristalsis
Enterorrhexis frenzied me cataclysm.

*Professor Paresis observes that many persons speak without thinking but that those same persons never think without speaking.*

## WHAT DO YOU THINK I SAID?

The other day I called a plumber to fix a leaky radiator. "Well," he answered, "I can't make it for about a week." "Okeh," I replied, "Come as soon as you can."

That same day I took a pair of shoes to the shoe repair shop and figured on leaving my watch to be cleaned at the jewelers. The shoe repair man told me to pick up the shoes in about three weeks. The jeweler estimated I could get the watch in two months.

We put in a new tile floor here in our building and were in need of a carpenter to plane down and rehang the doors. So I called four carpenters recommended by a lumber company and asked if they could put in a few hours in the evening or on Sunday. All I got was "No, too busy now to take on any extra work."

Then the next morning I stopped at the cleaners to leave a suit and found that they couldn't take any more clothes that week.

On my desk when I returned to the office was a note from the stoker company to the effect that it would be about a month before they could get around to cleaning and oiling our equipment.

And about 2:30 P. M. my phone rang and some fellow jumped on me with all fours. "I asked for a Doctor over a half hour ago. What in H—— is wrong with the medical profession these days? You send a Doctor here D—— quick or I'll see that the newspapers hear about this." "What's wrong there," I asked cautiously. "My wife has been sick for a week and it looks plenty bad," was the reply. "Have you had a doctor before," I replied. And when he said no — what do you think I told him?

—*Bulletin Toledo Acadamy of Med. Oct.* 1943.

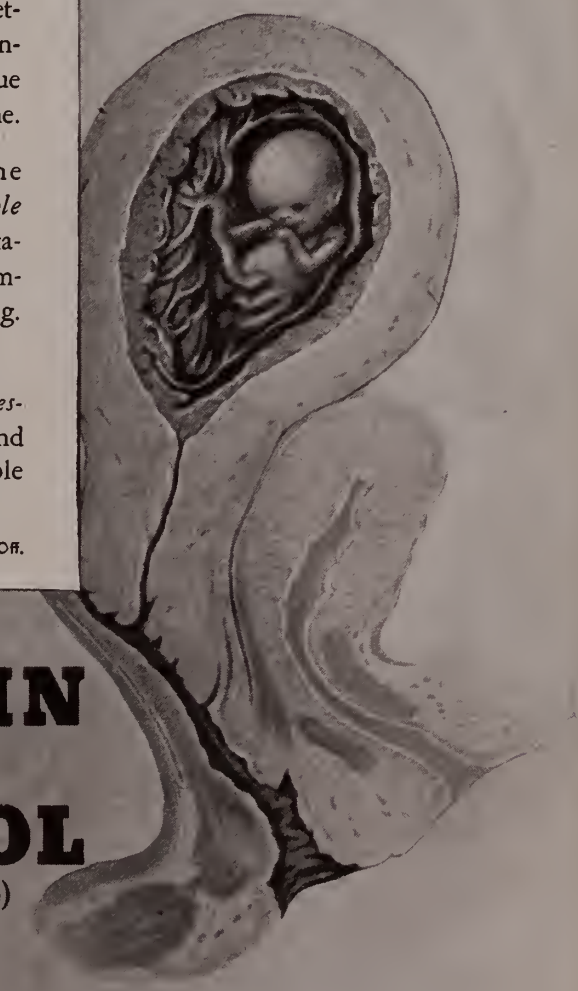
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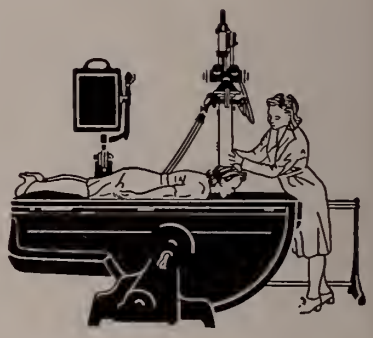
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# Book Reviews

Oral Diagnosis: by Kurt H. Thoma, D.M.D., Professor of Oral Surgery and Brackett Professor of Oral Pathology, Harvard University; Oral Surgeon and Chief of Dental Service, Massachusetts General Hospital; Oral Surgeon, Books Hospital Dental Surgeon, Dental Department, Consultant in Oral Surgery, Tumor Department, Boston Dispensary and Joseph H. Pratt Diagnostic Hospital; and Consulting Oral Surgeon, Beth Israel Hospital. Second Edition, Revised. 495 pages with 666 illustrations, 63 in colors. Philadelphia and London: W. B. Saunders Company, 1943. Price $6.75.

This second edition of "Oral Diagnosis" is a very comprehensive study of the entire subject at hand. The book is well written and easy to understand.

Doctor Thoma's method of examination, presentation of case history, and planning of treatment is excellent. The material is well indexed, and the subject matter easy to locate.

Instructive illustrations have been used throughout the text, and add materially to the value of the book.

The material presented should be recommended as of interest to the general practitioner.

R. B. V., (D.D.S.)

---

Experimental Surgery. A Laboratory Guide for Undergraduate Students by J. M. McCaughan. Published by C. V. Mosby Company, St. Louis, 1942.

This is a small loose-leaf volume designed as a laboratory guide for undergraduate students in experimental surgery and operative technic. The author has very appropriately put a great deal of information regarding sterilization, suture material, wounds, etc., into the book in addition to the actual operative technic. He has described a method of assignment of students to the respective positions on the operative team and has attempted to make the operation on the dog as practical as possible.

He has divided the course into thirteen exercises including dozens of operative procedures, including appendectomy, heriorrhaphy, cholecystectomy, gastroenterostomy, etc. After each exercise there are references and questions which bring up important points in that exercise. Blank pages are included which are to be filled out by the students. This is designed to simulate the case history of the human patient.

From the material in the book it is quite obvious that the author conducts a splendid course in experimental surgery and operative technic for the students. The only question about the book or the course is whether or not the medical curriculum can spare the time for the course. Most schools have considered the courses in operative technic on animals as not being sufficiently instructive to displace other courses, and rely upon the students getting their information on operative surgery by scrubbing in the operating room.

W. H. C.

---

Reconstructive Surgery of the Eyelids, by Wendell L. Hughes, M.D., F.A.C.S. 160 pages. Hempstead, New York. The C. V. Mosby Company, St. Louis, Mo., 1943. Price $4.00.

In this excellent book, the author has not only chosen a timely subject but he treats it in a

(*Continued on page* 36)

HE ORDERS THE JUMP... BUT HE'S

# FIRST TO LEAP



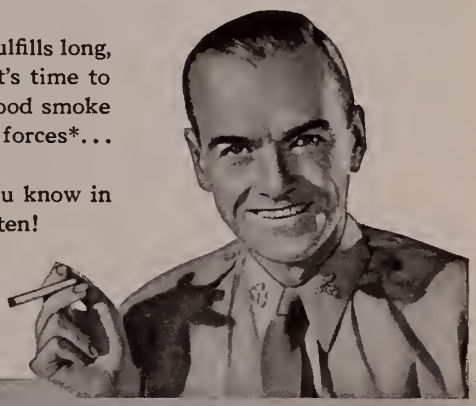
*"Ready!"* the pilot warns... Five tense minutes to go . . . the men "hook up" for the last brief check... then the paradoctor's command: *"Stand to the door!"* But it is he who leads them off . . . first overside . . . first to face the unknown perils that lie below.

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New reprint available on cigarette research—Archives of Otolaryngology, March, 1943, pp. 404-410.
Camel Cigarettes, Medical Relations Division, One Pershing Square, New York 17, N. Y.

BOOK REVIEWS (Continued)

manner which is both pleasing and helpful to student and the busy practioner.

Omitting none of the essentials necessary to a practical knowledge of the subject he does not burden his reader with the non-essentials which are so time consuming and of little or no interest.

Each chapter, of which there are ten, begins with a historical review of the development of plastic surgery pertaining to the subject together with his own methods.

There are references to an appended bibliography containing 451 citations in the literature. The text is profusely illustrated. F. C. W.

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A MANUAL OF CLINICAL THERAPEUTICS: By Windsor C. Cutting, M. D., Associate Professor of Therapeutics, Stanford University School of Medicine, San Francisco, Calif., 609 pages. Philadelphia and London: W. B. Saunders Company, 1943. Price $4.00.

With the ever increasing knowledge concerning the use of drugs in the treatment of disease, therapeutic application likewise changes constantly. New drugs are being added to the armamentarium of physicians at a rapid rate, and the proper treatment of yesterday is in many instances discarded today. As the author of this book states: "effective prevention and treatment of disease are the ultimate goals of medicine", and it is quite obvious to all that therapeutics is rapidly becoming more exact, and the empiric treatment of the past is not sufficient in present day scientific medicine.

The manual is most interesting and fascinating, as the field of medicine is well covered in its considerations, with the general therapeutic considerations in many diseases, the specific remedies which are known to be of greatest value. Again much attention is given to prevention of disease. The various types of infection with known etiology as well as those generally thought to be caused by a virus, are thoroughly reviewed from the standpoint of therapeutics. Likewise nutritional diseases and deficiencies, endocrine disturbances, metabolic diseases, allergic states, and many other types of conditions are described.

Eleven appendices are to be found, giving special procedures in the treatment, physiotherapy, symptoms and treatment of poisoning, diet lists, clinical physiological data, and a number of other equally important subjects.

The book is a compact guide for students, hospital attendants, and should likewise be of much interest to the practitioner who is ever desirous of reviewing the management of many types of conditions. The volume should be welcomed throughout medical circles in general.

---

GERIATRIC MEDICINE: Diagnosis and Management of Disease in the Aging and in the Aged. Edited by Edward J. Stieglitz, M. S., M. D., F. A. C. P. Consultant in Gerontology, National Institute of Health; Visiting Physician, Medical Service, Baltimore City Hospitals; Attending Physician, Washington Home for Incurables, Washington, D. C. Illustrated. W. B. Saunders Company, Philadelphia and London, 1943. Price $10.00.

It has long been known that the care of the aging and aged is and should be, a distinct specialty in medicine. These individuals have not only a different physiology from those in the younger age groups, but also are different physically and mentally, and are subject to a different type of ailment in many instances.

The book has been written largely with the needs of the average practitioner in mind, as it is usually the man in general practice who is called upon to look after this group of patients. Today more than ever before it is essential that the older group be given every opportunity to not only be self supporting, but also to contribute to the needed manpower of a nation at war.

Although the book was edited by Dr. Stieglitz, more than fifty physicians have participated in the preparation of the interesting authoritative text. The first ten chapters are devoted to general considerations, each written by physicians especially interested in the subject at hand. The second section covers specific systemic infective diseases, then in turn appear sections on disorders of metabolism, disorders of the mind and nervous system, disorders of the respiratory system, disorders of the circulatory system, disor-

(*Continued on page* 38)

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BOOK REVIEWS (Continued)

ders of the alimentary system, disorders of the gento-urinary system, disorders of the skeletal system, and disorders of the cutaneous system.

The book is not only well written and well edited, but it contains much information which will be of interest to all physicians. This is especially true of that large group in practice who have passed the half century mark in their own lives, and will have special reasons for desiring more information on this subject than those who have not already entered the period which is so completely covered, and are rapidly approaching the decades where greater personal care is necessary for their own well being.

The book unquestionably will be a most welcome addition to any modern medical library, and will no doubt be used freely by all who are privileged to read it.

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A TEXTBOOK OF MEDICINE (Sixth Edition): Edited by Russell L. Cecil, A. B., M. D., Sc. D., Professor of Clinical Medicine, Cornell University Medical College; Attending Physician, New York Hospital; Visiting Physician, Bellevue Hospital, New York City. Associate Editor for Diseases of the Nervous System, Foster Kennedy, M. D., F. R. S. E., Professor of Clinical Neurology, Cornell University Medical College; Attending Physician, New York Hospital; Visiting Physician in Charge, Neurological Service, Bellevue Hospital; Consulting Physician, New York Neurological Institute. Sixth Edition, Revised and Entirely Reset. 1566 pages with 195 illustrations. Philadelphia and London: W. B. Saunders Company, 1943. Price $9.50.

The fact that this very complete and most interesting textbook of medicine has undergone six revisions since 1927 is evidence of its popularity. This volume has been entirely reset; a long list of contributors participated in the preparation of this edition. It is surprising to note in the preface the many articles on subjects which did not appear in the last edition of only

(*Continued on page* 40)

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BOOK REVIEWS (Continued)

three years ago. Illustrations were added for the first time in the fifth edition, and proved so popular that more appear in this volume.

Another interesting feature is the change in format, the text being printed in double columns, which should prove to be popular with the reader. Although an all-American production, many of the contributors are in service, and it was no easy task for the editor to assemble the vast amount of material, as one article came all the way from China.

As in previous editions the sixth volume of "Cecil's Textbook of Medicine" covers the wide field of medicine, giving the etiology, morbid anatomy, epidemiology, symptoms, diagnosis, prophylaxis and treatment in much detail. It is a herculean task to cover so thoroughly the entire field of medicine in one volume, and the cost of this extensive book is indeed relatively low.

It is quite obvious to anyone who reads the book that this edition appearing literally as a war-time volume, will continue to lead the field among the modern textbooks of medicine.

---

THE PRINCIPLES AND PRACTICE OF INDUSTRIAL MEDICINE; Edited by Fred J. Wampler, M. D., Professor, Preventive and Industrial Medicine, Medical College of Virginia. A William Wood Book. The Williams & Wilkins Company, Baltimore, 1943. Price $6.00.

More than thirty contributors participated in the development of this book — men interested in every field of industrial medicine. The book was compiled not only for those men who have recently become interested in industrial medicine, but also for the students who previously received little consideration of this important and modern branch of medicine.

Many physicians today more than ever before are being required to give medical care to an ever-increasing number of workers. Every group employing many men must necessarily have a well organized and well equipped medical department to provide adequate care in case of casualties, as well as to minimize to the greatest extent possible, absenteeism through illness or injury.

Serious consideration is given to the cause and prevention of accidents, as well as to the effects on the maintenance of maximum manpower in

(*Continued on page* 42)




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## BOOK REVIEWS (Continued)

the plants through proper lighting and care of the eyes in industry, ventilation, prevention against industrial poisoning, dust, dangers of fatigue, occupational dermatoses, and many other important considerations along the line of industrial health.

Interesting chapters cover such important subjects as the nurse in industry; vocational and industrial rehabilitation: the industrial back; women in industry; industrial medical service for the small plant, and the importance of the careful pre-employment examination of workers.

The book should be of much interest today more than ever before, and it should well fill its stated dual purpose — to give information on important industrial hygiene subjects to physicians being asked to care for workers, and also to give the rudimentary knowledge to students who will eventually assume many similiar responsibilities when admitted to practice.

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CLINICAL ROENTGENOLOGY OF THE CARDIOVASCULAR SYSTEM: BY Hugo Roesler, M. D., F. A. C. P., Associate Professor of Roentgenology and Cardiologist Department of Medicine, Temple University School of Medicine; Cardiologist, Temple University Hospital, Philadelphia, Pennsylvania. Second Edition. 480 pages, 337 figures. Charles C. Thomas Company, 1943. Price $7.50.

Since the appearance of the first edition of this book in 1937 there have been many important developments in radiological aspects of cardiology to fully justify a complete revision and a second volume. The field of cardiology, like other specialties in medicine, has developed greatly in recent years. Although roentgenological studies are only one of several methods by which inportant information is obtained this is undoubtedly one of the highly essential fields.

It is brought out in the book that their are certain abnormalities of the cardiovascular system which can only be shown through roentgenological studies; while in other types of conditions, roentgen studies along with clinical findings are essential to the proper evaluation. The book discusses the limitations of roentgen studies as well

(*Continued on page* 46)

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BOOK REVIEWS (Continued)

as the values of the procedure in the many cardiological disturbances seen in modern practice.

The technique is well described in the first chapter, then the anatomy and roentgenology, normal cardiovascular findings through roentgen studies, measurements, structual changes, diseases of the aorta, pericardical disease, congenital malformations and peripheral vascular disease are in turn well covered. The many illustrations throughout the book add materially to its value to the reader.

The volume should be of great value to the Radiologist and to the Cardiologist alike, and will no doubt be of much value to the many physicians who desire authenic information on a highly important subject.

# Books Received

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

THE 1943 YEAR BOOK OF INDUSTRIAL AND ORTHOPEDIC SURGERY: Edited by Charles F. Painter, M.D., Orthopedic Surgeon to the Massachusetts Women's Hospital and Beth Israel Hospital, Boston. The Year Book Publishers, Incorporated, 304 South Dearborn Street, Chicago. Price $3.00.

THE ARTHROPATHIES. A Handbook of Roentgen Diagnosis; By Alfred A. de Lorimier, A.B.; M.A.; M.D., Colonel, Medical Corps, United States Army; Commandant, The Army School of Roentgenology, Memphis, Tenn. Formerly Director, Department of Roentgenology, Army Medical School, Washington, D. C. The Year Book Publishers, Inc., 304 South Dearborn Street, Chicago. Price $5.50.

PIONEERS OF PEDIATRICS. By Abraham Levinson, B.S., M.D., Assistant Professor of Pediatrics, Northwestern University Medical School; Professor of Pediatrics, Cook County Graduate School of Medicine; Attending Pediatrician, Children's Division of the Cook County Hospital; Senior Attending Pediatrician, Sarah Morris Hospital for Children of the Michael Reese Hospital; Senior Attending Pediatrician, Mount Sinai Hospital, Chicago. New York. Froben Press. 1943. Price $2.00.

THE MODERN MANAGEMENT OF COLITIS; By J. Arnold

(*Continued on page* 48)



# THE SUNSET YEARS AND *Adequate Nutrition*

As the degenerative processes gain the upper hand during the last decade or two of life, profound changes occur in many metabolic mechanisms. The gastrointestinal tract for example becomes less tolerant of abuses, and difficulty is experienced in digesting some foods which formerly did not prove troublesome. The loss of vigor characteristic of senescence can easily be aggravated to a point of incapacitation if self-chosen eating habits are not altered to prevent nutritional deficiencies. For only by properly satisfying the nutritional requirements can adequate strength and mental acuity be maintained.

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| CALCIUM | .25 Gm. | 1.104 Gm. | RIBOFLAVIN | .25 mg. | 1.278 mg. |
| PHOSPHORUS | .25 Gm. | .903 Gm. | NIACIN | 5.0 mg. | 6.9 mg. |
| IRON | 10.5 mg. | 11.94 mg. | COPPER | .5 mg. | .5 mg. |

*Each serving made with 8 oz. milk; based on average reported values for milk.



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## BOOKS RECEIVED (Continued)

Bargen, M.D., M.S., F.A.C.P., Chief of the Section on Intestinal Diseases, Division of Medicine, Mayo Clinic; Associate Professor of Medicine, Mayo Foundation, Rochester, Minnesota; Secretary, American Gastroenterological Association; Vice-Chairman, Section on Gastroenterology and Proctology, American Medican Association. Charles C. Thomas, Publisher, Springfield, Illinois and Baltimore, Maryland, 1943. Price $7.00.

MEDICAL RADIOGRAPHIC TECHNIC. Prepared by The Technical Service Department of General Electric X-Ray Corporation, under the editorial supervision of Glenn W. Files, Director, Charles C. Thomas, Publisher, Springfield, Illinois and Baltimore, Maryland, 1943. Price $6.00.

BACKACHE AND SCIATIC NEURITIS; Back Injuries, Deformities, Diseases, Disabilities, with Notes on the Pelvis, Neck, and Brachial Neuritis. By Philip Lewn, M.D., F.A.C.S., Associate Professor of Bone and Joint Surgery, Northwestern University Medical School; Attending Orthopaedic Surgeon, Cook County Hospital; Attending Orthopaedic Surgeon Michael Reese Hospital; Professor of Orthopaedic Surgery, Cook County Graduate School of Medicine, Chicago; Lieutenant Colonel, Medical Corps, U. S. Army. Illustrated with 235 Figures. Line Drawings by Harold Laufman, M.D., Instructor in Surgery, Northwestern University Medical School, Chicago; Captain, Medical Corps, U. S. Army. Lea & Febiger, Philadelphia, 1943. Price $10.00.

## SUBSTITUTE FOR TALC ON RUBBER GLOVES

Reemphasizing the very serious surgical hazard from the use of talc as a dusting powder for rubber gloves, M. G. Seelig, M.D.; D. J. Verda, M.D., and F. H. Kidd, M.D., St. Louis, recommend in *The Journal of the American Medical Association* for December 11 that potassium bitartrate be used as a sustitute.

## INFLATION

Mary had a little lamb,
She clipped the wool to spin it;
Meat shortage got her in a jam,
And then she had to skin it.

The five most common causes of the deaths of school children in the United States are, in the order named, accidents, appendicitis, influenza and pneumonia, rheumatic fever and tuberculosis. — *Science News Letter, June* 26, 1943.

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## HOW TO COUGH AND NOT SPREAD DISEASE

There would be fewer colds and much less tuberculosis, influenza, pneumonia, diphtheria, whooping cough and other diseases spread by saliva if people only would learn to cough and sneeze properly, Lieut. Samuel F. Harby, U.S. N.R., points out in the December issue of *Hygeia, The Health Magazine.*

"When ever you feel a cough or sneeze coming on," he advises, "turn your head away from other people, and cough down at the floor. The thousands of small droplets of saliva which escape inevitably from your mouth as you cough are thus thrown down at the floor, where they have little chance of getting on your associates, and especially into their mouths to cause respiratory infection.

"Even if you were able to cover your mouth completely with your hand, so that no droplets or spray could get by it, you would still fail to protect your associates from your germs, because your hand becomes soiled when you cough on it, and almost immediately afterward you touch other people, or the things which they will touch. Thus, indirectly, germs are transferred from your mouth to some one else's mouth — or what happens more frequently — to some one else's hand, food, eating utensil, or other object which will eventually reach his mouth. . . ."

## FORCE OF HABIT

A batch of German prisoners had just arrived in England and were being marched to the internment camp. Round a bend on the canal nearby a barge came slowly into view. The bargee cracked his whip to warn the lockkeeper of his coming. Immediately the prisoners broke ranks and ran in all directions.

"Hey!" roared the camp commandant.

'S'alright, sir," said a Tommy. "They've been eating so much horseflesh lately that every time they hear the crack of a whip they breaks into a gallop."

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## POINTS TO PRINCIPLES GOVERNING EVOLUTION OF MEDICAL PRACTICE

### A. M. A. Has Repeatedly Urged Improvements, Based On Sound Experimentation, Journal Says; British Now Seek Same Approach

The continuing evolution of medical practice, based on sound experimentation, has been urged repeatedly by the American Medical Association, through its House of Delegates, Board of Trustees and Council on Medical Service and Public Relations, *The Journal* of the Association declares in its November 20 issue. In an editorial summarizing the principles to govern the evolution of medical practice, adopted by the Representative Committee of the British Medical Association. *The Journal* points out that the final recommendations of the British group advocate the same approach to the problem of developing a sound system of medical service to meet the needs of all persons in a community. *The Journal* points out that the final recommendations of the British group advocate the same approach to the problem of developing a sound system of medical service to meet the needs of all persons in a community. *The Journal* says:

"Elsewhere in this issue appear the principles to govern the evolution of medical practice adopted by the Representative Committee of the British Medical Association and by representatives of many official bodies in Great Britain. This group comprised representatives of general practice, consultant and specialistic practice, public health, rural practice, medical staffs of provincial nonteaching hospitals and others. Special emphasis should be placed on the principle that the health of the people depends primarily on the social and environmental conditions under which they work, and that improvement and extension of measures to satisfy these needs should precede or accompany any future organization of medical service. Also fundamental is the principle that the efficiency of any medical service depends primarily on medical and scientific knowledge, which, in turn, is based on medical education.

"The British group establishes the principle that the function of the state should be to coordinate existing provisions, both official and nonofficial, to augment these where necessary, and to secure that they are available without economic barriers. Supplementary to this is the

statement that the state should confine itself within these wide limits, invading the personal freedom of both citizen and doctor only to the extent which the satisfaction of these functions demands. The platform of the American Medical Association likewise emphasizes the importance of an agency of the federal government, under which shall be coordinated and administered all medical and health functions of the federal government, exclusive of those of the Army and Navy, and the allotment of such funds as the Congress may make available to any state in actual need for the prevention of disease, the promotion of health and the care of the sick *on proof of such need.* The medical profession has not opposed appropriations by Congress of funds for medical purposes. It asks that the need be shown and that funds be locally rather than nationally administered.

"The British Representative Committee again insists on free choice as between doctor and patient as fundamental to sound medical practice and states emphatically that it is not in the public interest that the state should invade the doctor-patient relationship. It is, no doubt, for this reason that the Representative Committee says that it is not in the public interest that the state should convert the medical profession into a salaried branch of central or local government service.

"The Representative Committee of the British Medical Association advocates as a step forward in Great Britain the extension of the National Health Insurance Plan to include the dependents of insured persons and others of like economic status, and to cover consultant and specialistic services and laboratory and hospital facilities, as well as general practitioner services. This statement indicates at once how completely lacking has been the National Health Insurance Plan in approximating anything resembling the quality of medical service that prevails in the United States. This recommendation again emphasizes that the National Health Insurance Plan of Great Britain covers wage earners up to a certain level of income only, that it has *not* included the dependents, that it has *not* included others than wage earners of low economic status, that it has *not* provided consultant and specialistic service, or hospital facilities or laboratory service. The gradual development of prepay-

(*Continued on page* 52)

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MEDICAL PRACTICE (Continued)

ment plans in the United States has recognized the need for such services. The medical profession has approved prepayment plans to cover the cost of hospitalization, and also prepayment plans on a cash indemnity basis for meeting the costs of medical care. Certainly the gradual evolution in the practice of medicine that has taken place in this country has led to higher standards of medical practice and of medical service than are elsewhere available. The maintenance of the quality of the service is fundamental in any health program.

"The American Medical Association, through its House of Delegates, its Board of Trustees and its Council on Medical Service and Public Relations, has urged again and again the continuing evolution of medical practice, based on sound experimentation. Already many state and county medical societies, many industries and many insurance bodies have set up experiments of this type, some of which have already proved to be unsound. In this connection, therefore, the final recommendations of the Representative Committee of the British Medical Association, and of the Medical Planning Commission, deserve increased emphasis. They say:

There should be initiated, by arrangement and agreement between the government and the profession, organized experiments in the methods of practice, such as group practice, including health centers of different kinds, which should extend to general practitioner hospital units attached to general hospitals. Future developments in group practice should depend on the results of such clinical and administrative experimentation.

"Only by such controlled scientific experimentation can a sound system of medical service to meet the needs of all the persons in the community be developed."

---

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## CAUTION URGED IN USE OF NEW MOLD CALLED PATULIN, FOR COMMON COLD

Caution in considering the efficacy of a new preparation for the common cold, called "patulin," is advised by *The Journal of the American Medical Association* for December 25. *The Journal* says in part:

"Recent reports from London describe work with a preparation called "patulin" for the common cold. This substance is a metabolic product of penicillium patulum and has now been identified. . . . " Nearly 100 patients were treated and 85 untreated were observed as controls. "One of the patients showing dramatic improvement was Gye (one of the investigators) himself. A high proportion of the persons treated seemed to show recovery in a much more rapid and complete fashion than would have been expected without treatment. From this small sample the statistician Major Greenwood deduced that the results in the treated group would have been most unlikely to occur from pure chance alone. In the *Lancet* a week after publication of these reports appeared a communication from three investigators, headed by Stuart-Harris, which briefly records the results of giving patulin to 100 patients with the common cold and of not treating 100 alternate persons. The proportion of cases which showed clinical improvement was substantially the same in the two groups; the writers conclude that patulin had no demonstrable effect on the course of this series of colds as compared with the natural evolution of the disease. Pending the outcome of further studies, it would be unwise to view this new form of treatment of colds with too much optimism."

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You can tell an apprentice seaman by his look of great alarm.
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## ADVISE BRAIN OPERATION IN SELECTED CASES OF CHRONIC SCHIZOPHRENIA

"In certain selected chronic cases of schizophrenia (split personality), in the light of present knowledge, lobotomy (removal of a lobe or certain area of the brain by means of a tube inserted through a hole drilled in the skull) should be continued in order to restore many disabled persons to social usefulness," A. E. Bennett, M.D.; J. J. Keegan, M.D., and C. B. Wilbur, M.D., Omaha, advise in *The Journal of the American Medical Association* for November 27. "This operation," they continue, "has effected a good social recovery in 4 cases of aggressive paranoid schizophrenia. One catatonic type failed to improve. (The five cases are described in their report.)

"The problem of social rehabilitation of these patients opens up a new field of social and psychiatric nursing technics and needs more study to aid lobotomized patients to resume normal living."

The operation of prefrontal lobotomy for certain mental disorders was introduced by a Portuguese neurosurgeon, Egas Moniz, in 1936 and in this country in the same year by Walter Freeman, M.D., and J. W. Watts, M.D. As the Omaha men point out, the operation has been established as a useful procedure in psychiatric treatment. They believe its usefulness should continue to be investigated and that it should be limited to chronically disabled psychotic or mental patients unimproved by other treatments.

---

The intermittent but rather continuous reports of the tuberculosis infection of pupils from the teacher, the bus driver or the janitor make clear our obligation to provide regular X-ray examinations for these adults who are in continuous contact with school children. It would seem that no age group of teachers who have had the evidence presented to them would wish to remain without these examinations. — *Claire Turner; Dr. P. H. Jour. School Health, Sept.* 1943.

## STUDENTS IN NEW COURSE FROM 19 HOSPITALS

Representatives of 19 different hospitals have been enrolled in the new course in hospital administration at Northwestern University, Chicago, and only 8 of the 39 students taking this course are not connected with a hospital, the university has informed the Johnson & Johnson Research Foundation, New Brunswick, N. J., which recently made a grant to Northwestern to aid in making possible this special course. Of the eight persons not associated with a hospital, two persons are employed on hospital magazines, two are physicians, one is director of a hospital council and one is employed by the American College of Surgeons, the university said.

---

## SHOULD VITAMIN D BE GIVEN ONLY TO INFANTS?

Vitamin D has been so successful in preventing rickets during infancy that there has been little emphasis on continuing its use after the second year.

But now a careful histologic study has been made which reveals a startling high incidence of rickets in children 2 to 14 years old. Follis, Jackson, Eliot, and Park* report that postmortem examination of 230 children of this age group showed the total prevalence of rickets to be 46.5%

Rachitic changes were present as late as the fourteenth year, and the incidence was higher among children dying from acute disease than in those dying of chronic disease.

The authors conclude, "We doubt if slight degrees of rickets, such as we found in many of our children, interfere with health and development, but our studies as a whole afford reason to prolong administration of vitamin D to the age limit of our study, the fourteenth year, and especially indicate the necessity to suspect and to take the necessary measures to guard against rickets in sick children."

---

*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:11, July 1943.

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## TREATMENT FOR HEAD LICE

The formula of a lotion which proved to be quite satisfactory for the treatment of head lice and their eggs on children in an American hospital and on civilian populations in Mexico and which is recommended for general use in the control of head lice is reported in *The Journal of the American Medical Association* for November 27 by William A. Davis M.D., New York.

In the introduction to his report, Dr. Davis explains that "As part of a general program to devise methods for the control of typhus fever a systematic study was undertaken with a view to determining the louse-killing properties of various chemical agents. . . ." He points out that there are many objections to the older methods for the control of head lice and says that "The ideal method for treating pediculosis capitis should be by a lotion, since only a liquid can easily penetrate the entire hair and leave a residual for prolonged action. The fluid should rapidly kill lice and nits, should not have unpleasant properties such as greasiness, staining or odor and should be both cheap and lasting. Systemic laboratory studies revealed several materials with these properties. Phenyl cellosolve and benzyl cellosolve were the most efficient and were readily available. . . . For simplicity only phenyl cellosolve was used on human beings."

The formula used was phenyl cellosolve 40 per cent, ethanol 30 per cent, water 25 per cent and methyl salicylate (as a perfume) 5 per cent. In the investigation in a New York hospital, the lotion was applied on 50 children as soon as lice were discovered. It was applied so that the hair was thoroughly wet, and the nurses were cautioned to keep the fluid out of the eyes and the mouths of the children. No further treatment was used. No live lice were ever found after a single treatment.

## PHYSICIANS WARNED TO EXERCISE CARE IN USE OF "DORYL" FOR THE EYES

A warning to physicians to exercise care in the use or "Doryl," a crystalline preparation intended only for use in the treatment of eye diseases, is made by *The Journal of the American Medical Association* in its December 18 issue. Deaths have recently been reported following injection of the preparation, *The Journal* says, explaining that the drug "is available as a solution in ampules for intramuscular injection and as crystals for use in preparing solutions for the eye. Because the crystals also have been marketed in ampules, errors have been made in preparing these crystals for injection rather than using the available ampule solution for intramuscular use. The deaths which followed injection were due to the fact that the concentration was several hundred times greater than it should have been. . . ." Despite changes in labeling and packaging, at least two deaths have since occurred. The firm has now asked for the return of all Doryl shipped prior to Oct. 1, 1943. "Physicians," *The Journal* warns, "should examine carefully their own supplies to prevent further accident."

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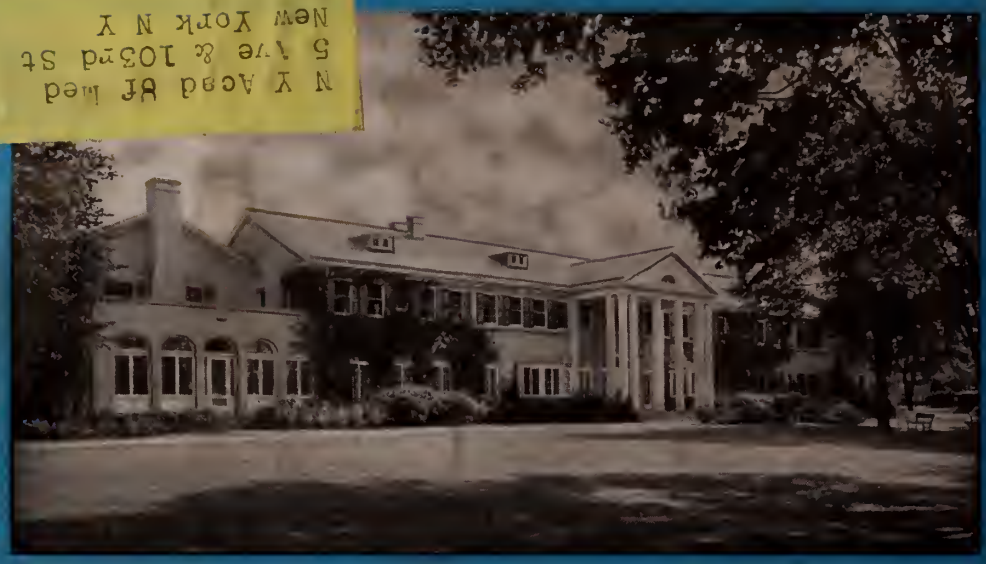
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# The ILLINOIS Medical Journal

VOL. 85 ✳ NO. 2

February, 1944

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OFFICIAL JOURNAL OF THE ILLINOIS STATE MEDICAL SOCIETY

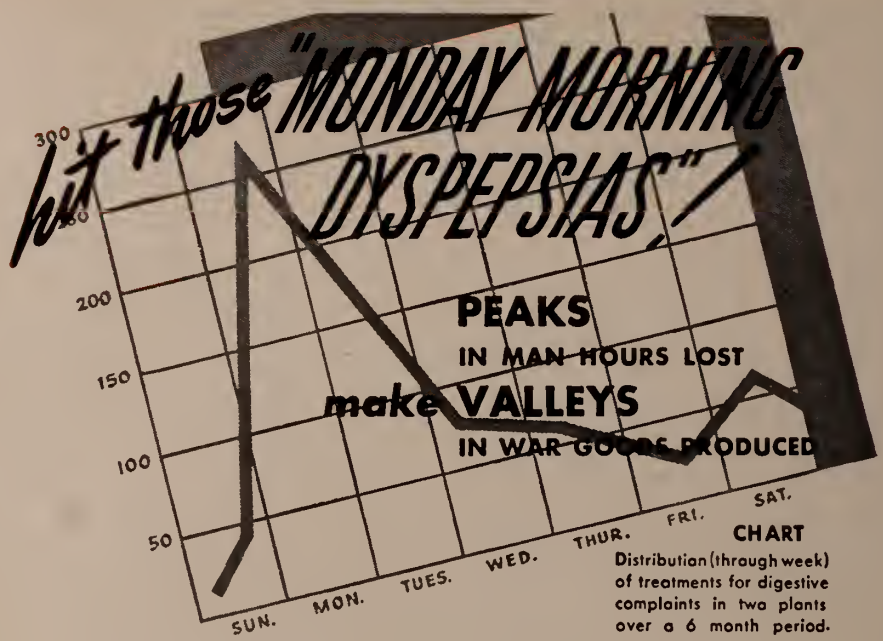



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Peptenzyme Digestant Tablets, and Powder, help to keep the civilian army on the job.

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As 5-grain tablets in bottles of 25, 100, 500, and 1000 tablets.
Powder: 1 oz.—8 oz. bottles.

**DOSAGE:**
Two tablets before and after meals, increased if necessary.
Powder: As a digestant — from 10 to 20 grains with each meal.




**REED & CARNRICK,** JERSEY CITY 6, N. J.
***PIONEERS IN ENDOCRINE THERAPY***

# PEPTENZYME DIGESTANT TABLETS


Entered as Second-Class Matter July 21, 1919, at the Post Office, Oak Park, Illinois, under the Act of March 8, 1879. Acceptance for mailing at special rate of postage provided for in Section 1102, Act of October 8, 1917, authorized July 15, 1918. Office of Publication, 715 Lake Street, Oak Park, Ill.

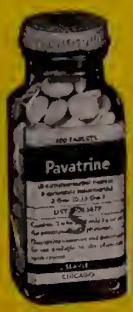
# Plan of Treatment in Bile Tract Dysfunctions

1. **KETOCHOL**—1 or 2 tablets t.i.d., to promote the secretion of thin, aqueous, free-flowing bile in the liver.
2. **DIET** rich in uncooked fats—cream, butter, eggs, etc.—to encourage gall bladder emptying.
3. **PAVATRINE**—3 to 6 tablets a day, to relax the sphincter of Oddi and reduce biliary-gastrointestinal spasm.






**KETOCHOL . . .** a nontoxic combination of the oxidized (keto) form of those bile acids normally present in human bile. Bottles of 100 and 500 tablets.




**PAVATRINE . . .** the new safe, *non-narcotic* antispasmodic ($\beta$-diethylaminoethyl fluorene-9-carboxylate hydrochloride). 2 gr. (130 mg.) tablets, bottles of 20, 100 and 1000.

**Ketochol and Pavatrine are the registered trademarks of G. D. Searle & Co.**

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ETHICAL PHARMACEUTICALS SINCE 1888
CHICAGO
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S E A R L E
RESEARCH IN THE SERVICE OF MEDICINE

*Calcium and Vitamin D*

*in pleasant-tasting, easy-to-take form—*

# CALCI-DELTA TABLETS

(Dicalcium Phosphate and Vitamin D)

*Lederle*



TO MEET the exceptional metabolic demands for calcium made upon the body at certain times—during pregnancy, lactation, early childhood—Lederle now makes available "Calci-Delta Tablets *Lederle*." These new tablets serve as an excellent source of calcium, phosphorus and Vitamin D. They are easily chewed and swallowed and their pleasant flavor disguises the rather disagreeable taste typical of calcium salts.

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"Calci-Delta Tablets *Lederle*" are also especially suitable for children to prevent rickets and promote normal tooth and bone development in early childhood.

BOTTLES OF
50 AND 100 TABLETS




*Specify Lederle*

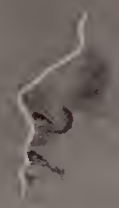
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Well-tolerated — fewer gastro-intestinal upsets—full doses can often be given to patients intolerant to the arsphenamines.

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# MAPHARSEN



No waiting for preparation of the solution—it is immediately soluble in the ompoule.

When arsphenamines are taken into the body, it is believed that approximately one-tenth of the amount administered is converted into arsenoxide. To this oxidized product, rather than to arsphenamines themselves, investigators attribute the spirocheticidal action of these drugs. MAPHARSEN* is meta-amino-para-hydroxyphenyl arsine oxide (arsenoxide) hydrochloride which offers an effective antisyphilitic therapy . . . a form that causes rapid disappearance of spirochetes and prompt healing of lesions . . . and one that has facilitated development of the highly-effective, modern types of antisyphilitic treatment.

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Represents only approximately 1/10th the arsenic dosage of the arsphenamines.

***You can now readily obtain supplies of Mapharsen Ampoules for use in your practice. Increased manufacturing facilities have made it possible for us to materially increase our output, and to maintain more adequate supplies in drug stores throughout the country.***

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*from Europe to America comes another*

# Sympatol

*a SAFE circulatory stimulant*

With a long and




*Now available as a 10% solution in 30 cc. bottles, as well as in 100 mg. tablets in bottles of 25 and 50.*

*Trade Mark* Sympatol *Reg. U. S. Pat. Off.*




# impressive record and a wide range of usefulness

Sympatol, as many physicians know—at least by its long and notable European reputation—is especially valuable in all circulatory asthenic states, particularly those accompanied by a blood pressure below the normal range.

Recognizing the clearly indicated need for a pharmaceutical of this specific character, Frederick Stearns & Company has undertaken to make Sympatol available to the American medical profession.

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Indications suggesting this circulatory stimulant cover all general debilitated states which include patients convalescing from colds and "flu"; "arrested" tuberculars; women in menopause; listless, run-down children; hypothyroids and many corresponding conditions.

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The pressor action of Sympatol increases the systolic blood pressure with little or no effect upon the diastolic pressure and the pulse rate. This results in an increased rate and quantity of blood flow through the entire vascular system without appreciably increasing the load on the heart. Of particular importance, this result is attained without stimulation of the central nervous system.

A digest of the exhaustive bibliography, covering the many fields in which Sympatol has been employed, will be gladly supplied to any physician interested in a more detailed study of this important addition to therapy. And, if especially requested, samples are available.

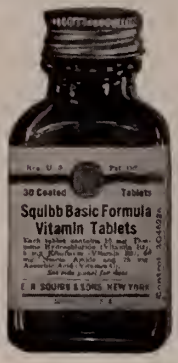
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## 2 IMPORTANT AIDS to Vitamin Therapy

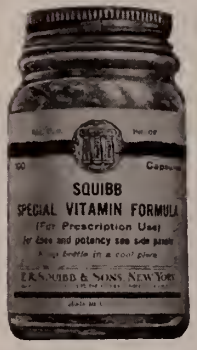



**A basic formula composed of a mixture of the water-soluble vitamins.**

For *treatment* of clinical syndromes of beriberi, pellagra, ariboflavinosis, and scurvy.

Each Tablet contains:

10 mg. Thiamine Hydrochloride
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5 mg. Riboflavin
75 mg. Ascorbic Acid




**One capsule supplies the full daily adult allowance.**

(Food & Nutrition Board, National Research Council).

For *supplementation* of deficient diets or where the requirement is greater than normal.

Each Capsule contains:

5000 units Vitamin A
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2 mg. Thiamine Hydrochloride
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75 mg. Ascorbic Acid

**No Trade Names to Remember**

**Tested Therapy**

***One Capsule . . . daily dose***

**Not Expensive**

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*Manufacturing Chemists to the Medical Profession Since 1858*

These two aids to vitamin therapy embody the latest findings in the field of nutritional deficiency disease . . . provide for intensive therapy necessary for speedy response . . . save time . . . save money.

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# New experimental indications for MALE SEX HORMONE THERAPY...




**NEO-HOMBREOL**

**Roche-Organon**

Recent clinical studies have highlighted the widening scope of androgen therapy. In a majority of patients with *angina pectoris*, testosterone propionate produces "definite therapeutic effects" and may prove "a very valuable adjunct in therapy" (Sigler, L. H., & Tulgan, J., *New York State J. Med.*, 1943, *43*:1424). The effect of androgen therapy in *retarded growth of adolescents* has been "far better than that achieved with other therapy" (Aub, J. C., & Kety, S. E., *New England J. Med.*, 1943, *228*:338). Male sex hormone therapy has also brought about "prompt relief or improvement" in *enuresis* (Schlutz, F. W., & Anderson, C. E., *J. Clin. Endocrinol.*, 1943, *3*:405). In *frigidity*, particularly in those females who have known libido but lost it, "androgens are specific" (Greenblatt, R. B., *J. Clin. Endocrinol.*, 1942, *2*:665).

*Roche-Organon Androgen Preparations—Neo-Hombreol* (testosterone propionate) ampuls, 5, 10, and 25 mg; *Neo-Hombreol* (*M*) (methyl testosterone) oral tablets, 10 mg; *Neo-Hombreol* (*M*) *Dosules*, 4 mg. Write for literature.

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# A NEW TECHNIQUE



# OF LOCAL CHEMOTHERAPY

## *in Oro-pharyngeal Infections*



ONE White's Sulfathiazole Gum Tablet chewed for one-half to one hour promptly initiates a *high* topical salivary concentration of *locally active* (dissolved) Sulfathiazole and *maintains*, throughout the maximum chewing period, an average concentration of 70 mg. per cent. Two tablets increase salivary concentration approximately 20%.

An average adult chewing a total daily dosage of 8 tablets, for as long as an hour each, should develop a blood level of Sulfathiazole not greater than one milligram per cent. Thus White's Sulfathiazole Gum provides an effective means of sustained *local* chemotherapy—with minimal risk of the untoward reactions frequently associated with intensive *systemic* use of sulfonamides.

Indications: septic "sore throat"; acute tonsillitis, pharyngitis; infectious gingivitis and stomatitis caused by Sulfathiazole-susceptible micro-organisms; peritonsillar abscess; prevention of local infection secondary to oral and pharyngeal surgery (e. g. tonsillectomy).

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*White's Sulfathiazole Gum*

# Paredrine-Sulfathiazole

## *Provides all three:*

1. **Prolonged Bacteriostasis**
2. **Non-Stimulating Vasoconstriction**
3. **Therapeutically Ideal pH**




**(1)** ***Prolonged bacteriostasis.*** Paredrine-Sulfathiazole Suspension is not a solution, but a *suspension* of 'Micraform' crystals of free sulfathiazole.

These crystals are not quickly washed away, but form an even frosting over the nasal mucosa. This fine frosting remains on those areas where ciliary action is impaired by infection—and thus provides *prolonged bacteriostasis* precisely where it is needed most. (The Suspension does not impair normal ciliary action or interfere with drainage.)



**(2)** ***Non-stimulating vasoconstriction.*** While 'Paredrine' exerts a shrinking action more rapid, complete and prolonged than that of ephedrine in equal concentration, it does not produce ephedrine-like central nervous side effects, such as nervousness, restlessness and insomnia.

## THE UNIQUE VASOCONSTRICTOR

# Suspension



(3) *Therapeutically ideal pH—5.5 to 6.5.* No irritation, no stinging and no hyperemia are caused by Paredrine-Sulfathiazole Suspension. Its slightly acid pH range—unlike that of the highly alkaline solutions of sodium sulfathiazole—*is identical with that of normal nasal secretions.*

This correct pH hastens:

(1) Restoration of normal ciliary action, and of the germicidal qualities of the nasal secretions.

(2) Return of the nasal mucosa from a pathologic status of alkalinity to a normal status of slight acidity.




*Smith, Kline & French Laboratories, Philadelphia.*

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# Assuring Safety and Effectiveness in ERTRON* Therapy

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The product which you employ to *Ertronize* your arthritic patients is made under the exclusive Whittier Process which assures high potency and absence of deleterious by-products. Careful laboratory control and assay guarantee the safety and effectiveness of ERTRON.

In addition, the safety and effectiveness have been proved in clinical investigations reported in an extensive bibliography. This bibliography refers to ERTRON by name and the results, consequently, apply only to ERTRON.



The use of inert gases to protect highly reactive sterols from oxidation.



Activation Control—All environmental and activating factors are rigidly controlled.

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# Ertronize the Arthritic

To *Ertronize* the arthritic patient, employ ERTRON in adequate dosage over a sufficiently long period to produce beneficial results. Gradually increase the dosage to the toleration level. Maintain this dosage until maximum improvement occurs.

*Ertronize* early and adequately for best results.

ERTRON alone—and no other product—contains electrically activated, vaporized ergosterol (Whittier Process).

Supplied in bottles of 100 and 50 capsules.

Also new 500 capsule bottle.

**ETHICALLY PROMOTED**




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For the physician who wishes to reinforce the routine oral administration of ERTRON by parenteral injections, ERTRON *Parenteral* is now available in packages of six 1 cc. ampules. Each ampule contains 500,000 U.S.P. units of electrically activated, vaporized ergosterol (Whittier Process).



NUTRITION RESEARCH LABORATORIES
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It presents ALL THE THERAPEUTIC PROPERTIES of crude tar, but in a form which immediately gains complete patient cooperation.

It is ODORLESS—all the offensive tar odor is removed, replaced by a pleasant discreet scent. It is

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Tarbonis presents an especially processed Liquor Carbonis Detergens (5%), together with lanolin and menthol, in a special vanishing type cream. It is available on prescription through all pharmacies, in 2¼ oz. and 8 oz. jars, and through accredited surgical supply houses in 1 lb. and 6 lb. containers. • Physicians are invited to send for clinical test sample and the new comprehensive, illustrated brochure on tar medication.

# *Therapeutic Efficacy* OF TAR

*in a New... Cosmetic...Form*

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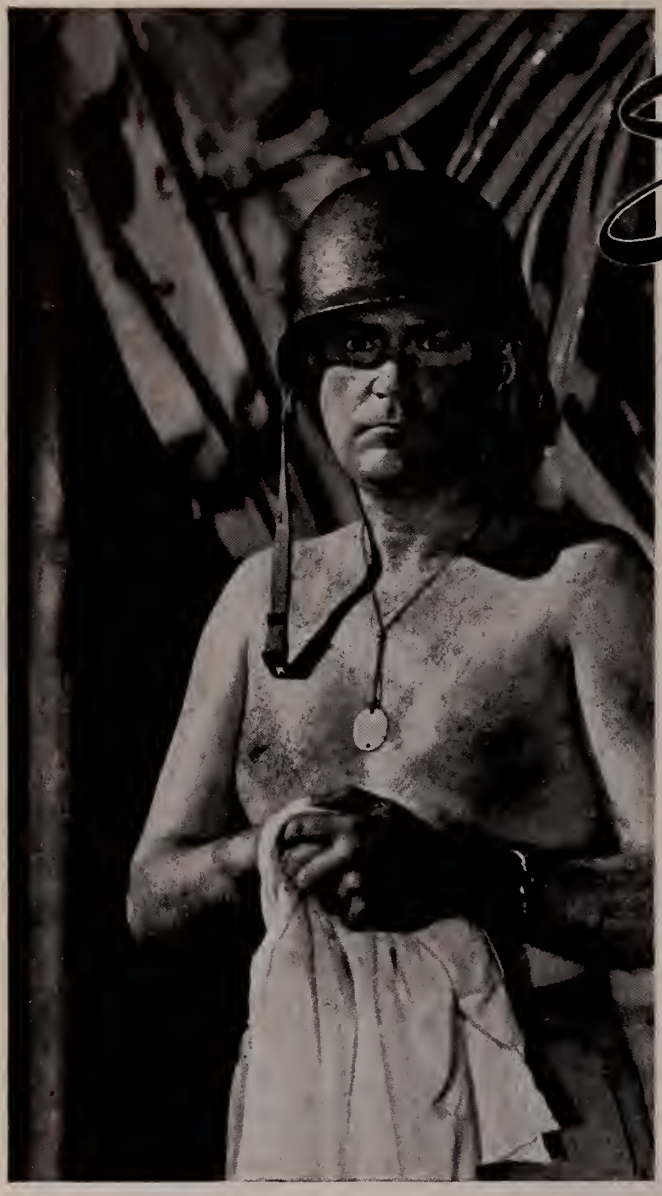
NON-STAINING—it cannot be detected on the skin after application. It is NON-SOILING—it cannot stain or soil linen and clothing. It is GREASELESS—being a vanishing-type cream it is in a highly cosmetic form, requiring no removal before reapplication. It is NON-IRRITANT.

The high therapeutic efficacy of TARBONIS has been demonstrated by almost a decade of clinical use. Its antipruritic, decongestant, remedial properties are of established value in every form of eczema, including infantile eczema, psoriasis, folliculitis, seborrheic dermatitis, industrial dermatoses (virtually regardless of cause), and in a number of other, especially pruritic, disorders in which tar is indicated.

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THE TARBONIS COMPANY
1220 Huron Rd., Cleveland 15, Ohio

TARBONIS



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*Now—a delicate brain job... then another... and another... to the tune of mortar fire... blast... shock! Steady... steady—easy now. "O. K.... clear the table! Next!" Operating... treating... night and day... Two hours sleep in seventy-two!**

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Yet that's just a side glance into a war doctor's life. When does he relax? Seldom, but that's when he's eager for a cheering smoke. Camel his likely choice—the fighting man's favorite**—for mildness, sheer good taste.

Friends, relatives in service? Remember them often—with a carton of Camels—the gift of gifts for service men!

*From actual experiences of U. S. doctors in war.



**1st in the Service**

**With men in the Army, Navy, Marine Corps, and Coast Guard, the favorite cigarette is Camel. (Based on actual sales records.)




# Camel

costlier tobaccos

New reprint available on cigarette research—Archives of Otolaryngology, March, 1943, pp. 404-410. Camel Cigarettes, Medical Relations Division, One Pershing Square, New York 17, N. Y.

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There has long been a real need for a potent, mercurial diuretic compound which would be effective by mouth. Such a preparation serves not only as an adjunct to parenteral therapy but is very useful when injections can not be given.

After the oral administration of Salyrgan-Theophylline tablets a satisfactory diuretic response is obtained in a high percentage of cases. However, the results after intravenous or intramuscular injection of Salyrgan-Theophylline solution are more consistent.

Salyrgan-Theophylline is supplied in two forms:

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# SALYRGAN-THEOPHYLLINE

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*Brand of* MERSALYL with THEOPHYLLINE.

ARMY E NAVY

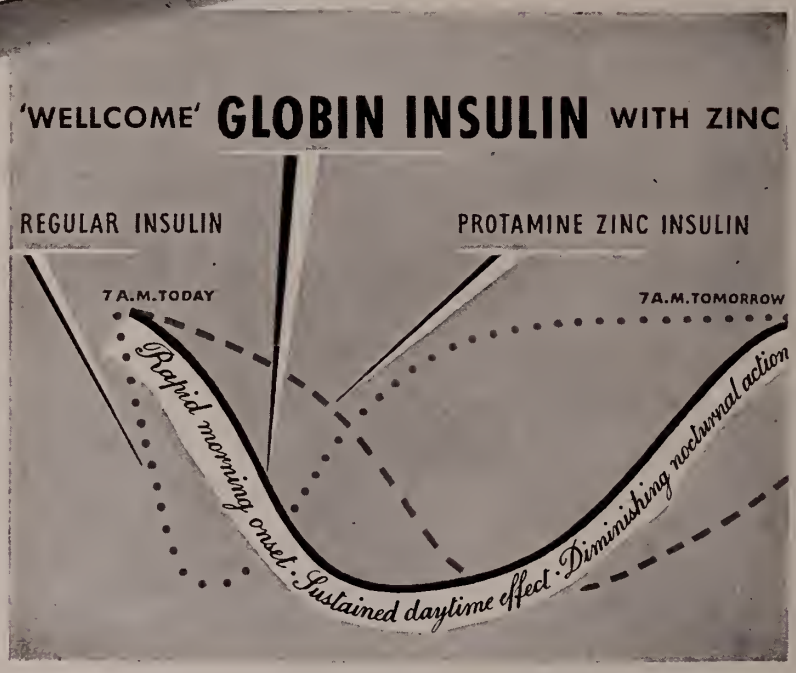
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Clinical results concur, when the supplement employed is Elixir B-Plex—the *natural* vitamin B complex.

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**THE NATURAL VITAMIN B COMPLEX**

Simple to prescribe

# A COMPLETE UNIT FOR APPROVED CONTRACEPTIVE TECHNIQUE

**provides for patient comparison of Jelly and Cream (no extra cost)**



The Koromex Set Complete contains in a handsome case:

**1** H-R Diaphragm with special pouch

**1** Koromex Trip Release (takes all size diaphragms)

**1** Tube Koromex Jelly (higher lubricating factor)

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**1** Set Dickinson-Freret Fitting Charts

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SURGEON EDWARD CUTBUSH
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FROM his pen flowed the first writings on American Naval medicine—writings which crusaded for greater protection of the health of seamen in foreign service—writings which revealed a vision and understanding that have inspired succeeding generations of Navy physicians. In 1804 he established the first U. S. Naval Hospital on foreign soil — in Syracuse, Sicily — where he put into practice the principles about which he wrote so well. In the Naval Hospitals of today, such as the New Zealand installation pictured below, his ideas and ideals still live.

Ciba Pharmaceutical Products, Inc. salutes the men in the Medical Services of the United States as well as those in civilian forces responsible for health "behind the lines."

## Nestor of the Navy Medical Corps



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# VIOFORM for use in LEUKORRHEA

## caused by trichomonas vaginalis

FOAMY, milky or greenish vaginal discharge, vulvar pruritus and burning usually disappear quickly with the well established trichomonacide—Vioform.*

VIOFORM INSUFFLATE, used by the physician, and VIOFORM INSERTS, used by the patient between visits, effectively eradicate the parasites . . . restore normal acidity . . . and act as effective deodorants.

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*Available:*
Insufflate: Bottles 1 oz. and 8 oz.
Inserts: Boxes 15



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*Tomorrow's Medicines from Today's Research*

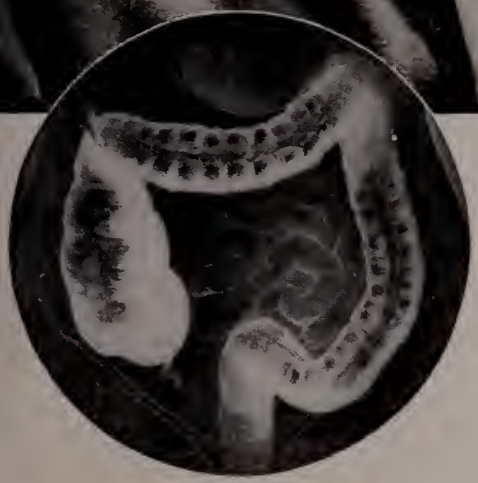
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SUMMIT, NEW JERSEY

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ENFORCED lack of exercise and the frequent necessity for adherence to a strict diet may often induce constipation in the patient recovering from surgery or disease.

Restoration and maintenance of "habit time" is of prime importance to the patient's well-being.

Petrogalar gently, persistently, *safely* helps to establish "habit time" for bowel movement.

Petrogalar augments the intestinal contents by supplying unabsorbable fluid. It is evenly disseminated throughout the bowel, effectively penetrating and softening hard, dry feces resulting in comfortable elimination with no straining . . , no discomfort.

Petrogalar is an aqueous suspension of pure mineral oil each 100 cc.. of which contains 65 cc. pure mineral oil suspended in an aqueous jelly.

A medicinal specialty of Petrogalar Laboratories, Inc., Chicago, Illinois, Division WYETH Incorporated.

Constant uniformity assures palatability—normal fecal consistency. Five types of Petrogalar provide convenient variability for individual needs.

Petrogalar

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*For Powerful non-irritating*
SALICYLATE THERAPY

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"RARE CHEMICALS"

THE SALICYLIC ESTER OF SALICYLIC ACID

Antirheumatic . . . Antipyretic . . . Analgesic
For Acute Rheumatic Fever, Acute and Chronic Articular Rheumatism, Tonsillitis, Grippe, Neuralgia, and allied conditions

*Advantages*

- Tasteless . . . Odorless • Non-irritating to the stomach
- Approximately twice as active as Sodium Salicylate
- Therefore given in only half the dosage.

RARE CHEMICALS, INC.
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Send me literature and a trial quantity of SALYSAL

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*Tablets—*

5 grains each, in tubes of 10, and bottles of 50, 250 and 1,000.

*Powder—*

in bottles containing one ounce.

RARE CHEMICALS

**RARE CHEMICALS, INC. • FLEMINGTON, N. J.**




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Obliterative treatment of varicose veins with **CHEPLIN'S SODIUM MORRHUATE** is well established clinically — acting rapidly, effectively and safely. This modern sclerosing solution is practically painless, causes no bruising and rarely produces necrosis if accidentally injected outside the vein. Literature on request.

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***SODIUM MORRHUATE is supplied as 5% solution in:***

2 cc. ampules . . in boxes of 12, 25 & 100
5 cc. ampules . . . in boxes of 6, 25 & 100
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## ..Only *one type* ZymenoL

### Equally Effective in CONSTIPATION-COLITIS-DIARRHEA

Different types or combinations are not needed because ZymenoL is a *Natural Approach* to the two basic problems of Gastro-Intestinal Dysfunction

**NORMAL INTESTINAL CONTENT ASSURED**

..Through Brewers Yeast Enzymatic Action.*

**NORMAL INTESTINAL MOTILITY RESTORED**

..With Complete Natural Vitamin B Complex.*

This two-fold natural therapy restores normal bowel function without catharsis, artificial bulkage or mineral oil leakage.

**Teaspoon Dosage** **Economical** **Sugar Free**

*Write for Free Clinical Size*

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## *Magmasil*

**Greater Acid Neutralizing Power**

●

**Longer Protective Action**

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**Fewer Doses Needed**

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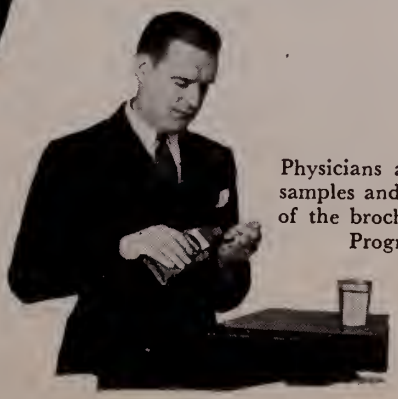
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The Illinois Medical Journal

February, 1944

VOL. 85, NO. 2

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Harry Culver, Walter Stevenson, Raymond W. McNealy.

# Editorials

## CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE

Even though started in war time, the Chicago Medical Society will hold its first annual clinical conference at the Stevens Hotel, Chicago, on March 14, 15, 16, 17, 1944. A group of outstanding clinicians from all parts of the country are being scheduled to present clinics and papers which will be of general interest to all physicians.

Committees appointed some time ago have been functioning faithfully so that everything will be properly arranged before the clinical conference begins. The Executive Committee, with Charles H. Phifer, as chairman has Robert S. Berghoff, Warren W. Furey, Oscar Hawkinson, Julius H. Hess, James H. Hutton, Herman L. Kretschmer, Malcolm MacEachern, Josiah J. Moore, Fred H. Muller, George W. Post, and James P. Simonds on its personnel.

The program committee is composed of some 30 prominent Chicago physicians representing every branch of medicine and they are assuming responsibility for the selection of clinicians and speakers to develop a well balanced and highly interesting four day session.

As is the case in most present day big meetings, there will be both a scientific and technical exhibit, and good progress is reported on the respective activities of the committees responsible for their selection. Medical Journals of the Middle West will carry notices concerning the meeting, and the successive Bulletins of the Chicago Medical Society will likewise have much information pertaining to the clinical conference. Thousands of physicians will likewise receive programs by mail so that all in this area will be well informed as to the character of the meeting and type of programs to be presented.

We will predict that in years to come, the Chicago Medical Society Annual Clinical Conference will be one of the outstanding conferences of its kind held anywhere in the country.

THOSE PLANNING TO ATTEND THIS CONFERENCE SHOULD MAKE THEIR HOTEL RESERVATIONS WITHOUT DELAY.

## PENICILLIN ASSIGNED TO STATE HEALTH DEPARTMENT

It was recently announced that two million units of penicillin has been allocated to the Illinois Department of Public Health, to be used in the treatment of gonorrheal ophthalmia, the cases to be cared for at St. John's Hospital, Springfield. From information at hand, it seems quite likely that this will be a pioneering project, as at the moment no record is available to show that penicillin has been used to this time in that type of condition.

It has been reported that several cases of this type of ophthalmia in infants under care at St. John's Hospital have not responded to the usual

treatment, and a great deal of interest will be created through this venture into modern research on the part of the State Health Department personnel.

Penicillin being manufactured in such small quantities, and with a small percentage yet available for civilian use, its exact value as a therapeutic agent has not been definitely established, although many interesting reports have been issued following its use in a number of conditions, with excellent results.

More recently information has been released relative to other molds and their extracts which may be of much value in the treatment of infective conditions, and following the end of the war research workers will no doubt have additional incentives to develop many agents of value in the treatment of disease, some of which may prove to be of inestimable value.

**★ BUY AN EXTRA BOND ★**

## ACTION IN TIME MEANS LIFE

It has been stated that cancer is the most curable of the fatal diseases. That is an interesting statement and is not a contradiction of itself, as it might at first seem to be. Its justifications lies in the nature of cancer itself — for cancer in its early stages is localized, limited, and capable of being completely removed or destroyed.

Cancer in its late stages is as sinister as a disease can be. It is widespread and has invaded surrounding tissues with ill-defined irregular strands of abnormal growth. If untreated and unchecked, cancer is uniformly and universally fatal. It is this grim fact that brings out the contrast between early and late stages of the disease.

The picture, however, is far from being a gloomy one. Each year more and more people are learning that "time" is the key word in cancer control. Each year thousands more people are coming to their doctor with very early


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signs and symptoms that may mean cancer. As a result they are being treated in time to prevent cancer or to cure it if it has started. The value of annual or semi-annual physical examination is becoming clearer to an ever-increasing number of men and women. The Women's Field Army of the American Society for the Control of Cancer is growing yearly at a faster rate. Today three hundred thousand women throughout the United States are enlisted in the fight against cancer — the fight to bring knowledge and confidence into every home in the country.

Cancer Prevention Clinics — where perfectly well persons report periodically for a physical "check up" — have been established in some cities and are doing excellent work. The idea will spread and grow. Lives will be saved, suffering avoided. Death will be cheated. Americans of the future will visit such clinics as a matter of routine.

It is well when the world is darkened by the fierce storm clouds of war to remember that there are men and women working quietly but tirelessly to allay fear and to bring peace and hope to hundreds of thousands of people — to your friends and mine — to your family and mine — perhaps to you and me ourselves.

For thirty years the American Society for the Control of Cancer at 350 Madison Avenue, New York City, has been the leader in this campaign. It will gladly provide, without charge, information which you may desire. It asks you to enlist in the fight against cancer for your own sake as well as for those whom you may be able to help. Do not delay. Remember that in cancer "action in time means life".

C. C. Little, ScD., Managing Director of the American Society for the Control of Cancer

---

## CHAIRMEN OF THE COMMITTEE ON ARRANGEMENTS FOR THE 1944 ANNUAL MEETING

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### DID YOU GET YOUR JANUARY JOURNAL?

*If you are one of the few who did not receive your copy of the January issue of the JOURNAL, here is the reason.*

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*It was possible to determine the names on some copies and additional JOURNALS were printed and mailed at a later date. However, it was impossible to read all addresses, and if you are one who did not receive a copy, please mail us a post card to 30 N. Michigan Ave., Chicago 2, and it will be sent you promptly.*

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# Correspondence

## PRELIMINARY PROGRAM CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE

March 14th, 15th, 16th & 17th, 1944
Stevens Hotel — Chicago

Tuesday March 14th

8:00 A.M. Diagnostic Clinic "Breast Tumors"
Dr. Alexander Brunschwig, Professor of Surgery, University of Chicago

8:30 A.M. Diagnostic Clinic "Chronic Painful Feet"

9:00 A.M. Address "Amoebiasis and Dysentery"
Walter L. Palmer, Professor of Medicine University of Chicago

9:30 A.M. Address "Value of X-Ray in the Study of Post Operative Emergencies and Complications"
Dr. James T. Case, Professor of Radiology Northwestern University Medical School

10:00-11:00 A.M. Intermission for Review of Exhibits

11:00 A.M. Surgical Panel "Blood and Blood Substitutes"
Dr. Lester Dragstedt, Professor of Surgery University of Chicago
Dr. Karl Meyer, Associate Professor of Surgery Northwestern University Medical School
Dr. Sidney O. Levinson, Director Samuel Deutsch Convalescent Serum Center Michael Reese Hospital
Dr. Garrott Allen, Instructor in the Department of Surgery University of Chicago

12:00 to 1:30 P.M. Noon intermission

1:30 P.M. Address "The Clinical Significance of Spontaneous Hemorrhage in Infancy and Childhood"
Dr. Henry G. Poncher, Professor of Pediatrics University of Illinois School of Medicine

2:00 P.M. Address "Anesthetic Emergencies"
Lt. W. A. Conroy, M.C., Gardiner General Hospital — Chicago, Ill.

2:30 P.M. Diagnostic Clinic — "Industrial Dermatosis"
Dr. Earl Osborne, Professor of Dermatology and Syphilology University of Buffalo School of Medicine, Buffalo, New York

3:00 to 4:00 P.M. Intermission for review of exhibits

4:00 P.M. Address "The Use and Abuse of Cesarean Section"
Dr. Edward G. Waters, Assistant Clinical Professor Obstetrics and Gynecology Columbia University School of Medicine, New York

4:30 P.M. Address "The Employment of the Handicapped"
Dr. Harold A. Vonachen, Medical Director Caterpillar Tractor Company, Peoria, Ill.

5:00 P.M. Address "War Neuroses — Their Rehabilitation and Absorption into Industry"
Dr. Lewis J. Pollock, Professor and Chairman Department of Nervous and Mental Diseases, Northwestern University Medical School

5:30 to 7:00 P.M. Dinner intermission

7:00 P.M. Address "Recent Advances in Endocrinology"
Dr. Willard O. Thompson, Associate Professor of Medicine University of Illinois College of Medicine

7:30 P.M. Address "Fears and Anxieties in Children"
Dr. Bert I. Beverly, Assistant Professor of Pediatric Psychiatry University of Illinois College of Medicine

8:00 P.M. Address "Penicillin"
Dr. Donald G. Anderson, Research Fellow in Medicine, Evans Memorial Hospital, Boston, Mass.

8:30 P.M. Address "This Thing Called Allergy"
Dr. Karl D. Figley — Toledo, Ohio

9:00 P.M. Address "Differential Diagnosis and Treatment of Ectopic Pregnancy"
Dr. N. Sproat Heaney, Professor of Obstetrics and Gynecology (Rush) University of Illinois College of Medicine

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Wednesday March 15th

8:00 A.M. Address "The Management of Acute Head Injuries"
Dr. Paul C. Bucy, Associate Professor of Neurology and Neurological Surgery University of Illinois College of Medicine

8:30 A.M. Diagnostic Clinic — "The Primary Management of Injuries of the Eye Both Mechanical and Chemical"
Dr. Glen W. Nethercut, Associate Ophthalmologist Illinois Eye and Ear Infirmary

9:00 A.M. Diagnostic Clinic — "Hematuria — Diagnosis and Treatment"
Dr. Charles M. McKenna, Professor of Genito-Urinary Surgery University of Illinois College of Medicine

9:30 A.M. Address "Heart Burn"
Dr. Walter C. Alvarez, Professor of Medicine University of Minnesota Graduate School, Rochester, Minnesota.

10:00 to 11:00 A.M. Intermission for review of exhibits

11:00 A.M. Medical Panel "The Use of Sulphonamides in Upper Respiratory Infections"
Brig. Genl. Hugh J. Morgan, United States Army, Chief Consultant in Medicine — Washington, D. C.
Dr. Italo Volini, Professor and Head of Department of Medicine Loyola University School of Medicine
Dr. Oswald H. Robertson, Professor of Internal Medicine University of Chicago

12:00 to 1:30 P.M. Noon intermission

1:30 P.M. Address "Surgery of the Colon"
Brig. Genl. Fred W. Rankin, U. S. Army Office of the Surgeon General, Washington, D. C.

2:00 P.M. Diagnostic Clinic "Eczema"
Dr. Edward A. Oliver, Professor and Chairman Department of Dermatology Northwestern University Medical School

2:30 P.M. Diagnostic Clinic "The Problem of the Obese Child"
Dr. I. P. Bronstein, Associate Professor of Pediatrics University of Illinois College of Medicine

3:00 to 4:00 P.M. Intermission for review of exhibits

4:00 P.M. Address "The Clinical Aspects of Heart Block"
Dr. Louis N. Katz, Director of Cardio-Vascular Research, Michael Reese Hospital
Dr. J. Roscoe Miller, Dean and Associate Professor of Medicine Northwestern University Medical School

4:30 P.M. Address "Meningococcic Septicaemia and Meningitis"
Lt. Col. Worth B. Daniels, Chief of Medical Service, Fort Bragg, N. C.

5:00 P.M. Diagnostic Clinic "Diagnosis and Treatment of Functional Uterine Bleeding"
Dr. Herbert E. Schmitz, Professor Gynecology and Obstetrics Loyola University School of Medicine, and Associate, Dr. Janet Towne

DINNER — 7:30 P.M.

Grand Ball Room — Stevens Hotel — Informal
For members of the profession, their ladies and friends.
(Program to be announced later)

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Thursday March 16th

8:00 A.M. Address "Management of Prolonged Labor"
Dr. William C. Danforth, Professor of Gynecology and Obstetrics Northwestern University Medical School

8:30 A.M. Address "Bronchoscopy in Pulmonary Diseases of Childhood"
Dr. Paul H. Holinger, Associate Professor Laryngology, Rhinology and Otology University of Illinois College of Medicine

9:00 A.M. Diagnostic Clinic "Diabetes"

9:30 A.M. Address "Fractures" —
(a) General Principles of Treatment of Fractures
Dr. Kellogg Speed, Professor of Surgery University of Illinois College of Medicine
(b) A Common Individual Type
Dr. William R. Cubbins, Professor and Director Division of Bone and Joint Surgery Loyola University School of Medicine

10:00 to 11:00 A.M. Intermission for review of exhibits

11:00 A.M. Address "Urology"
Dr. Herman L. Kretschmer, Clinical Professor Genito-Urinary Surgery (Rush) University of Illinois College of Medicine

11:30 A.M. Address "Rheumatic Heart Disease"
Lt. Comdr. David H. Rosenberg, U. S. Naval Hospital — Great Lakes, Illinois

12:00 to 1:30 P.M. Noon intermission

1:30 P.M. Address "The Abuse of Sedatives in Medical Practice"
Dr. Frederick P. Moersch, Associate Professor Psychiatry University of Minnesota — Rochester, Minnesota

2:00 P.M. Address "Some Aspects of the Tuberculosis Problem"
Colonel Esmond R. Long, Army Service Forces Office of the Surgeon General, Washington, D. C.

2:30 P.M. Address "Malaria"
Lt. Colonel Charles M. Caravati, Chief of Medical Service and
Captain Robley D. Bates, Jr., Officer in Charge of Malaria Study, Percy Jones General Hospital, Battle Creek, Michigan

3:00 to 3:30 P.M. Intermission for review of exhibits

3:30 P.M. Address "Prevention and Treatment of Eclampsia"
Dr. William J. Dieckmann, Professor of Obstetrics and Gynecology University of Chicago.

4:00 P.M. Address "Peritonitis"
Dr. E. W. Alton Ochsner, Professor of Surgery Tulane University, New Orleans, Louisiana

4:30 P.M. Address "Trends in the Care of the Infantile Paralysis Patient"
Dr. Herman C. Schumm, Associate Professor Orthopaedic Surgery University of Wisconsin School of Medicine — Milwaukee, Wisconsin

5:00 P.M. "Clincial Pathological Conference"
Dr. Edwin F. Hirsch, Director of Henry Baird Favill Laboratory St. Luke's Hospital

Military Program — 8:00 P.M.
(Details to be announced later)

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Friday March 17th

8:00 A.M. Address "Obscure Abdominal Tumors: How the Roentgen Examination Can Aid in their Diagnosis"
Dr. Adolph Hartung, Professor of Radiology University of Illinois College of Medicine

8:30 A.M. Address "Surgical and Medical Management of Burns"
Dr. Henry N. Harkins, Associate Professor Surgery — Johns Hopkins Hospital — Baltimore, Maryland

9:00 A.M. Address "Gynecological Disorders among Industrial Workers"
Dr. H. Close Hesseltine, Associate Professor Obstetrics and Gynecology University of Chicago

9:30 A.M. Address "The Practical Side of Endocrinology"
Dr. Roy G. Hoskins, Managing Editor Journal of Clinical Endocrinology, Boston, Massachusetts

10:00 to 11:00 A.M. Intermission for review of exhibits

11:00 A.M. Address "Effects of Drugs on the Blood"
Dr. Roy R. Kracke, Professor of Pathology Emory University — Atlanta, Georgia

11:30 A.M. Address "Emergency Maternal and Infant Care — How it Affects the Doctor"
Dr. Hugo V. Hullerman, Chief, Division of Maternal and Child Hygiene — Department of Public Health — State of Illinois — Springfield, Illinois

12:00 to 1:30 P.M. Noon intermission

1:30 P.M. Address "Complications of External Fixation of Fractures"
Dr. J. Albert Key, Professor of Orthopaedic Surgery — Washington University — St. Louis, Missouri.

2:00 P.M. Diagnostic Clinic "Fungus Infections of the Skin"
Dr. J. H. Mitchell, Professor of Dermatology (Rush) University of Illinois College of Medicine

2:30 P.M. Address "Coronary Disease"
Dr. Drew W. Luten, Asso. Professor Clinical Medicine, Washington University School of Medicine, St. Louis, Mo.

3:00 P.M. Address "Cause of Reactions in Blood Transfusions"
Dr. I. Davidsohn, Director of Laboratories and Pathologist Mt. Sinai Hospital

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## PROCEDURES FOR OBTAINING REIMBURSEMENT BY AGENCY MAKING AVAILABLE NECESSARY TREATMENT, CARE, AND SUPPLES REQUIRED BECAUSE OF LAST ILLNESS OF OLD AGE PENSION RECIPIENTS

### GENERAL INSTRUCTIONS

In accordance with the policy announced in Official Bulletin No. 50, issued October 7, 1943, local relief agencies responsible for meeting the costs of medical and hospital care for non-paupers under Paragraph 25 of the Pauper Law may obtain from the Commission reimbursement in full for such portion of these non-pauper expenditures as represents the costs to the local agency of care extended during the last illness of Old Age Pension recipients. The period of last illness has been defined as a period of 60 days which includes the day of death and 59 days immediately preceding the day of death. Medical and hospital care may include costs for such items as ambulance, nursing care, nursing home care, and drugs.

Under this policy for reimbursement in full for the costs of the last illness of Old Age Pension recipients, the local relief agencies will not be relieved of their responsibility under Paragraph 25 of the Pauper Law (1) for meeting necessary medical and hospital costs for OAP recipients other than the costs for last illness; (2) for meeting all necessary medical and hospital costs for all other non-paupers.

*Agencies Receiving State Relief Funds.* Local agencies receiving state funds for general relief purposes normally obtain through regular allocation procedures state funds to apply toward all-non-pauper medical costs, including costs of the last illness of Old Age Pension recipients. The procedures outlined in this bulletin provide for additional reimbursement when the total state funds allocated do not meet in full, proper costs incurred by such local agencies in providing medical and hospital care during the last illness of Old Age Pension recipients.

*Agencies Not Receiving State Relief Funds.* Local agencies not receiving state funds for general relief purposes may obtain reimbursement from state funds only for costs incurred during the last illness of Old Age Pension recipients as defined.

*Affidavit Not To Be Required.* The affidavit, stipulated in Paragraph 15b of the Pauper Law and Rules 6 and 7 of Section II of the Commission's Rules and Regulations, shall not be required as a condition of eligibility for receipt of medical or hospital care as a non-pauper. Wherever feasible, the local agency may require that the patient or his family submit a written application which will indicate that assistance in meeting such costs is being requested of the local agency.

*Reimbursement Requirements.* As a prior condition for obtaining reimbursement for expenditures made during the last illness of Old Age Pension recipients, the local agency shall comply with the following regulations:

1. Submit to the Commission for review and approval a schedule of medical, hospital, and nursing, rates on the basis of which the local agency proposes to pay for medical and hospital care for general relief recipients and for non-paupers, including Old Age Pension recipients.
2. Establish for each case for which request for reimbursement is submitted written evidence that eligibility of the case was determined in accordance with Rule 4 of Section II of the Commission's Rules and Regulations. This written evidence shall be made available for inspection by representatives of the Commission.

It will be necessary for the local relief agency to develop procedures for providing medical care for relief recipients and non-paupers including OAP, BA, and ADC cases in co-operation with physicians, hospitals, and County Departments of Public Assistance at its earliest convenience. The plan may be worked out with the help of the IPAC county representative and shall be submitted to the Commission for review and acceptance.

### INSTRUCTIONS FOR THE LOCAL RELIEF AGENCY IN PREPARING FORM AR-84, "REQUEST FOR REIMBURSEMENT BY AGENCY MAKING AVAILABLE NECESSARY TREATMENT, CARE, AND SUPPLIES REQUIRED BECAUSE OF LAST ILLNESS OF OLD AGE PENSION RECIPIENT"

All local relief agencies of townships and commission counties shall be required to submit Form AR-84 in order to obtain reimbursement from the Commission for obligations incurred

for necessary treatment, care, and supplies required during the last illness of an Old Age Pension recipient.

The local agency shall prepare Form AR-84 in quadruplicate, shall attach a copy of all itemized receipted bills to the original, and shall notify the IPAC county representative that this form has been prepared and is ready for review.

The county representative shall then review in the office of the local agency information supplied by that agency and by the County Superintendent of Public Assistance, and make such additional check of the books and records of the local relief agency and the County Department of Public Assistance as may be necessary to determine whether or not the case was eligible for medical and hospital assistance from the local relief agency. (Instructions for applying Rule 4 of Section II of the Rules and Regulations to Old Age Pension cases are available in the office of the IPAC county representative.) The local relief agency is entitled to receive reimbursement for last illness only during that portion of the 60-day period in which the OAP recipient was in active or suspended status. If his examination reveals any question as to the eligibility of the case, the county representative shall discuss any necessary correction or adjustment in the report with the local relief agency concerned.

When all necessary adjustments have been made, the county representative shall sign the form in the space provided and route copies of the form as follows:

1. Original with attached itemized receipted bills to the Division of Allocation and Research of the Illinois Public Aid Commission, Room 2000, 160 North La Salle Street, Chicago 1.
2. The second copy to be retained by local agency.
3. The third copy to the County Superintendent of Public Assistance.
4. The fourth copy to be retained by the IPAC county representative.

The local relief agency shall prepare Form AR-84 as follows:

*Township.* Self-explanatory.

*County.* Self-explanatory

*Name and Case Number of OAP Recipient.* Enter the name and case number of the recipient in whose behalf the local relief agency incurred obligations against relief funds for care given on the day of death or within 59 days immediately preceding the day of death.

*Address.* Enter home address of the recipient at the time of his last illness.

*Date and Place of Death.* Enter date and place of recipient's death. State the name of hospital, nursing home, or institution in case death occurred in one of these places.

*Nature of Last Illness.* Enter the attending physician's complete diagnosis if obtainable. When a written diagnosis from the physician is not available, state the nature of the illness as understood by the local agency.

*Net Obligations Incurred.* Itemize in this section only such services and supplies as were given on the day of death or within 59 days immediately preceding the day of death. In instances where the local agency gave medical or hospital aid or supplies for a longer period, such items shall not be entered in this section although they were given in connection with the illness which ultimately led to the recipient's death. For example, if surgery was performed 65 days preceding the death of an Old Age Pension recipient, the cost of which surgery was paid from relief funds, in accordance with the local agency's responsibility under Paragraph 25 of the Pauper Law, this item should not be entered in the request for reimbursement.

*Column a — Person or Institution.* Enter the name of physician, druggist, nurse, hospital, etc., furnishing treatment, care, and supplies.

*Columns b and c — Treatment, Care, and Supplies Furnished.* Enter the date or inclusive dates on or between which treatment, care, and supplies were furnished for each item listed in

*Column d — Total.* This column shall represent the total obligations against relief funds on the date of death or within 59 days immediately preceding death and shall equal the total of entries in columns e, f, and g.

*Columns e, f, and g.* Enter total obligations incurred for each month.

*Signature of Local Authority.* The local authority shall read and complete the certification and sign and date Form AR-84.

### INSTRUCTIONS FOR SUBMITTING ITEMIZED RECEIPTS

At the time reimbursement is requested, receipts for payments made must be submitted by all local relief agencies.

Receipts are necessary only for those bills incurred for the 60-day period designated as the last illness of Old Age Pension recipients. All itemized receipts must be attached to the original copy of Form AR-84.

Requests for reimbursement for bills incurred for care given between July 15, 1943 and December 31, 1943 may be submitted at any time prior to March 1, 1944. Thereafter, such requests shall be submitted to reach the Chicago office of the Commission not later than 60 days following the death of the Old Age Pension recipient in whose behalf the local relief agency incurred the bills. To facilitate review by the Commission, each request for reimbursement shall be submitted as promptly as possible after the death of each Old Age Pension recipient and not accumulated for submittal along with requests pertaining to other recipients.

In order to maintain proper controls and records of expenditures made during the last illness of Old Age Pension recipients, all local relief agencies wishing to obtain reimbursement from the Commission shall maintain records of expenditures and prepare reports for this purpose, as described under instructions for recording reimbursements.

### INSTRUCTIONS FOR THE COUNTY REPRESENTATIVE

In signing this statement the county representative certifies that he has made a thorough examination of the books and records of the local relief agency and the records of the OAP recipient as maintained in the office of the County Department of Public Assistance and that eligibility has been determined in accordance with Paragraph 25 of the Pauper Law and Rule 4 of Section II of the Commission's Rules and Regulations.

The county representative shall investigate the status of the OAP recipient during the entire 60-day period of last illness and shall determine the period in which the recipient was in active or suspended status. The local relief agency is entitled to receive reimbursement for last illness only during that portion of the 60-day period in which the OAP recipient was in active or suspended status.

The county representative shall then sign and date all four copies of the form and forward them.

Initial supplies of Form AR-84 are being mailed to all county representatives. Additional supplies may be requisitioned as needed from Stores Department.

### INSTRUCTIONS FOR RECORDING REIMBURSEMENTS FOR THE LAST ILLNESS OF OLD AGE PENSION RECIPIENTS

*Reimbursement of Units Receiving State Relief Funds.* Townships or commission counties which are receiving state relief funds may include in the "Estimates of Relief Requirements," Forms AR-87, all proper expenditures which they make in conformity with rules of the Commission for medical and hospital care of "non-paupers," including Old Age Pension recipients, and state relief funds will be allocated accordingly. When expenditures for last illness subsequently have been accounted for on the basis of approved Forms AR-84 submitted to the Commission, additional allocations will be made to those local authorities whose payments for last illness have not been fully met by state funds.

*Reimbursement of Units Not Receiving State Relief Funds.* Townships or commission counties not receiving state relief funds (eligible or ineligible for state relief funds) will be reimbursed for all proper expenditures, made in conformity with Rules of the Commission, for medical and hospital care required as a result of the last illness of Old Age Pension recipients. This reimbursement will be made on the basis of approved Forms AR-84 submitted to the Commission.

*Method of Recording Reimbursement.* Townships or commission counties when reimbursed by the Commission for proper expenditures made for medical and hospital expense of the last illness of Old Age Pension recipients shall record such reimbursements in the "Allocation" and "Receipts" columns of the control ledger with the identifying information "Last Illness Allocation" in the "Particulars" column.

RAYMOND M. HILLIARD

Public Aid Director

## MENTAL HEALTH ACT

### Physicians' Certificate

Several county judges have relayed to the Department of Public Welfare some anxiety on the part of physicians lest they be subject to malpractice suits resulting from filling out Physicians' Certificates required for the admission of mental patients to the State Hospitals. The objection has especially been raised to giving the specific name of the suspected mental illness on Form 6, line 5.

The physicians are hereby advised that the forms will be acceptable if instead of giving the name of a specific mental illness such phrases as the following are employed: "I believe him to be suffering from mental illness," "Depression," "Confusion", and other descriptive but not diagnostic phrases.

The Department being aware of the shortage of physicians, is arranging to reduce the number of medical examinations needed by combining the forms for emergency admission and permanent court commitment. These forms were formerly numbers 13 and 6, respectively, and are now being combined into a new form 6 which is currently in the hands of the printers.

It is anticipated that these forms will be in the hands of each county clerk for distribution to physicians soon after February 15.

The Department of Public Welfare welcomes suggestions from the medical profession as to the operation of the Mental Health Act for the convenience of the busy practitioner, as well as to meet the needs of mentally ill persons in this State. Suggestions should be sent to Conrad Sommer, M.D., Deputy Director, Department of Public Welfare, Mental Hygiene Service, Springfield, Illinois.

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## AMERICAN COLLEGE OF SURGEONS TO HOLD 22 WAR SESSIONS

Twenty-two cities distributed throughout the United States and Canada have been selected by the American College of Surgeons as headquarters for one-day War Sessions to be held in March and April, 1944. Advancements in military medicine and developments in civilian medical research and practice under the spur of the war emergency will be presented by authorities representing governmental agencies and by civilian physicians and surgeons.

The meetings will be open to the profession at large, including medical officers of the Army and the Navy, residents, interns, medical students, and executive personnel in hospitals. For the latter special hospital conferences, to be held simultaneously with the scientific sessions, are being arranged. Those who plan to attend the War Sessions may select the meeting which in place or time is most convenient, regardless of the states and provinces which, for the purposes of organization, are designed on the schedule as participating in a given meeting.

The United States Army, Navy, Public Health Service, Veterans Administration, Procurement and Assignment Service, and the Office of Civilian Defense, are assigning representatives to participate in the meetings. In Canada, the corresponding agencies are likewise assigning official representatives. Experiences of medical officers who have been on active duty in combat zones will be especially featured. In the hospital conferences, such agencies as the War Production Board, the War Manpower Commission, the American Red Cross, and groups interested in student nurse recruitment, will be represented.

Each meeting will open at 8:30 a. m. with the showing of official U. S. Army and U. S. Navy films on medical and surgical subjects, such as evacuation of the wounded, fractures, bomb blast, burns, and treatment of wounds. From 9:30 to 11:30 Army and Navy representatives who have been on active duty abroad will report; from 11:30 to noon representatives of the Public Health Service will report on measures for the control of endemic and epidemic diseases. Current problems of the Procurement and Assignment Service will be presented by a representative at the luncheon conference from 12:15 to 2:00 o'clock. Between 2:15 and 5:00 p. m., three scientific presentations by medical members of the armed forces and by civilian members of the medical profession will be made; a scientific presentation will be made by a representative of a medical service in industry; and the program for veterans will be presented by a representative of the Veterans Administration. From 5:00 to 5:30 p. m. the need for protective services in time of war will be presented by a representative of the Office of Civilian Defense. The concluding session will be a dinner meeting and open forum with all participants in the day's program as the panel of experts to lead discus-

sion of any and all subjects presented during the day together with other problems of interest to the medical and hospital professions. The motion picture showing, public health service session, luncheon conference, civilian defense program, and the dinner meeting and open forum will be attended by both the medical and hospital groups. The hospital representatives will discuss wartime hospital problems and how they are being solved, from 9:30 to 11:30 a. m., and will hold a round table conference on "Wartime Hospital Service" from 2:15 to 5:00 p. m. Illinois-Wisconsin session will be held at the Stevens Hotel, Chicago, Monday, March 6, 1944.

## ANNOUNCEMENT OF REFRESHER COURSE IN OTOLARYNGOLOGY

The Department of Otolaryngology of the University of Illinois College of Medicine announces its spring refresher course, to be held at the college in Chicago, March 20 to 25, incl. 1944. The course will be largely didactic, but some clinical demonstrations have been included. It is intended primarily for specialists, who under existing conditions, are able to devote only a brief period to postgraduate review study. The fee is $50.00. Registration will be limited. In letter requesting application, state school and year of graduation; also give details concerning specialty training and experience. Address — Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago, Illinois.

## MISSISSIPPI VALLEY MEDICAL SOCIETY TO MEET IN PEORIA

The Tenth Annual Meeting of the Mississippi Valley Medical Society will be held at the Pere Marquette Hotel, Peoria, Ill., next Septemeber 27, 28. The officers recently elected are: President, C. Paul White, Kewanee, Ill., President-Elect, Grayson L. Carroll, St. Louis; First Vice-President, Milton E. Bitter, Quincy, Ill., Second Vice-President, E. A. Cunningham, Louisiana, Mo., Third Vice President, Con R. Harken, Osceola, Ia., Secretary-Treasurer Harold Swanberg, Quincy, Ill. Members of Board of Directors; (Illinois) Charles Harmon of Springfield, G. A. Sihler, Jr., of Litchfield, L. H. Sloan and C. C. Maher of Chicago, E. F. Parker of Moline, E. E. Nystrom of Peoria and Ralph McReynolds of Quincy; (Missouri) F. J. Tainter and Clyde Dyer of St. Louis, and W. F. Francka of Hannibal; (Iowa) F. A. Hennessy of Calmar, J. H. Randall of Iowa City, and B. J. Dierker of Ft. Madison. Although no Scientific Exhibits were shown last year they will be a feature of the Peoria meeting next September.

## EARLY AVIATION MEDICINE

One hundred and twenty years before the airplane was invented in 1943 the first medical studies or experiments were made on flying. It was about this time that the first hot air balloons were being made, and after small ones ascended, larger ones were made and the people wondered whether it would be safe for a human. To test this they sent the first animals ever to fly — a chicken, a duck, and a sheep. These descended with no ill effects, and it was thought safe for a human. It was decided first to try a criminal; if he came back alive he was to have his freedom. It happened, however, a young, daring French nobleman named Pilatre de Rozier, volunteered, probably after many caustic and taunting remarks from a French mademoiselle who hoped to get rid of him in this manner. At any rate she was unlucky because he came back after an uneventful ascent on October 15, 1783. About two months later this same de Rozier noticed pain in his ears on another ascent. This is historic as the first reported ill-effects of flight, and is still important today.

Three years later, in 1786, a technical "Handbook of Aeronautics" contained the first reference to lack of oxygen to appear in the literature. Speaking of an ascent: "The spirits are raised by the purity of the air, and rest in a cheerful composure. In an ascent all worries and disturbances disappear as if by magic due to the change from hot, putrid, and impure air to cool, pure air impregnated with the invigorating aerial acid."

In 1862 a couple of men, Glaisher and Coxwell by name, ascended to the remarkable height of 29,000 feet. Glaisher noticed he could not see well, and his hearing was fading, next his legs and arms became paralyzed. He had the presence of mind to grasp the valve rope in his teeth and as they descended his senses gradually returned to normal. This gives the first picture of severe oxygen lack due to altitude.

The first physician to devote his entire time to the study of the medical problems of aviation was Paul Bert, of France, who after many years of study, published in 1878 a book of some 1200 pages describing his findings.—*Leonard K. Knapp, New Orleans Medical and Surgical Journal, August,* 96: 63, 1943.

The health of the people is really the foundation upon which all their powers as a State depend. Benjamin Disraeli.

# Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

The Wagner-Murray-Dingell Bill remains the most important medical economic problem both from the viewpoint of the profession and the public.

It would seem that The American Medical Association and the state and local societies are attacking the problem in the practical way. The National Physicians Committee is continuing its excellent work and should have our continued support especially during this critical year.

Just recently there has been organized the Association of American Physicians and Surgeons, Inc. This organization was sponsored and founded under the leadership of a group of physicians all members of the Lake County Medical Society of Indiana. Articles of Incorporation and By-Laws have been adopted, officers and directors elected. Under the Articles of Incorporation the purpose or purposes are set forth as follows:

> To supplement the work of existing scientific medical societies by uniting physicians and surgeons so that they may act effectively in the public interest to improve the quality of medical care; to achieve the universal distribution of medical and surgical care under conditions that will both improve the quality of the service and remove economic barriers to its delivery; to establish general public understanding of and cooperation with the profession in the objectives and purposes of individual and organized activities and to promote ideal relations between the profession and the public; and to protect and improve the welfare and interests of its members in order that the profession may improve its service through the maintenance of professional and ethical standards that will attract the best of men and women to the study and practice of the art and science of medicine, and to that end will stress moral character and ethical attitude of applicants for matriculation as being of equal importance with scholastic attainments. It is committed to policies which give to the individual physician as well as to the patient his freedom of action, so that the traditional relation of physician and patient shall be maintained inviolate.
>
> The ultimate test of all of its actions shall always be the public interest.

All of the physicians in the United States have been or will be mailed the Articles of Incorporation and By-Laws which set forth in great detail the purpose of the organization and the By-Laws governing the same. Every physician should take the time to read them in full.

The organization's objectives as set forth in the Purposes are praiseworthy. However, Article XIII of the By-Laws is as follows:

> A. It is not in the public interest and is inimical to the interests of this Association and of its members for them to engage in or associate in consultation or other cooperation with others engaged in:
>
> (1) Participation in any plan, scheme, or system whereby
>
> (a) An individual physician is responsible jointly, severally, or collectively for the provision of general medical benefit in any area, territory, or district;
>
> (b) Remuneration for services, or a schedule of fees, is arbitrarily fixed by any public authority, officer, or agency;

(c) Any fee scale or schedule may be fixed on a nation-wide basis without regard to local conditions or needs;

(d) The number of potential patients of any practitioner may be fixed by any public authority, officer, or agency;

(e) Any complaint or charge against a participating physician concerning professional acts or omissions may be heard and determined by any lay individual or by a board, panel, or committee, a majority of whom are not physicians and surgeons; provided, that nothing herein shall be construed to abridge the right of a hospital to adopt and enforce rules for the management of the institution and its medical and surgical staff, nor to deny the courts in any jurisdiction the right and power to function according to law;

(f) The patient is ordinarily denied the right to consult one physician and obtain his services without the advice or consent of another;

(g) Any person is compelled to enter into a scheme or plan of health insurance or benefits;

(2) Serving upon the staff of any hospital whose standards are or may be fixed by any public authority, officer, or agency, to the exclusion of, or without the voice of, the management of such hospital and the members of its medical and surgical staff.

B. Nothing herein shall be construed as an attempt to control or interfere with physicians and surgeons serving with the American Red Cross or serving in the armed forces.

C. The code of ethics of the American Medical Association is adopted for the government and control of the members of this Association, in so far as it is compatible with the objectives hereof.

D. By becoming a member of this Association, such member does thereby subscribe to and agree to promote, observe, and defend all of the principles of the Association as set forth in its articles of incorporation, these by-laws, and any subsequent lawful order.

This raises a very important question of whether this does not smack somewhat of a union. While most of us are opposed to any form of state medicine we will not take the position of defying the government if we are unfortunate enough to have the Wagner-Murray-Dingell Bill or some portion of it adopted. Then it becomes the question of every individual physician as to whether or not he cares to participate under such regulations in the rendering of medical care.

As previously stated the American people and the government will and should look to the American Medical Association for medical leadership.

It will be interesting to note what progress the Association of American Physicians and Surgeons, Inc. makes in enrolling membership throughout the various states.

The American Medical Association has always welcomed all organizations that maintained high standards to assist them in their program and policies. One must question the advisability at the present time of supporting the Association of American Physicians & Surgeons, Inc. because it quite probably would cause some disturbances in the plans of the American Medical Association that would have severe political repercussion at the present time.

R. K. Packard, M.D., Chairman
Committee on Medical Economics

January 29, 1944

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## THE GREAT PHYSICIAN

"In the history of medicine there are many names associated with the discovery of facts, with learned treatises and with technical achievements of one kind or another; there are relatively few of whom we think especially as physicians in the sense in which this word is used in regard to Suydenham, for instance. It is a rare blending of learning and humanity, incisiveness of intellect and sensitiveness of the spirit, which occasionally come together to an individual who chooses the calling of Medicine; and then we have the great physician."—*Doctor and Patient by Francis W. Peabody, M.D.*

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The hospital must share with the home the disgrace of being a major reservoir of tuberculosis infection. Patients with undiagnosed, as well as diagnosed tuberculosis pass on the disease to employees. Employees take it home to their families. The Modern Hospital, Oct., 1943.

# Medicine's Role in the War Effort

## POSTWAR GRADUATE MEDICAL EDUCATION

### A Preliminary Report by the Council on Medical Education and Hospitals

Thousands of physicians whose hospital training has been interrupted by the call to military service will be seeking advanced training after the war. Therefore the Council on Medical Education and Hospitals has undertaken a study of postwar graduate educational facilities as one of its major responsibilities. A preliminary survey has been instituted to determine all available and potential facilities for advanced training in connection with intern and residency hospitals, undergraduate and graduate medical schools, departments of health, state medical associations and other agencies interested in graduate or postgraduate medical education.

TABLE 1.—DISTRIBUTION OF RESIDENCIES

| | |
|---|---|
| Anesthesiology | 350 |
| Cardiology | 55 |
| Communicable diseases | 108 |
| Dermatology and syphilology | 188 |
| Epilepsy | 8 |
| Fractures | 60 |
| Gynecology | 188 |
| Obstetrics-gynecology | 311 |
| Obstetrics | 287 |
| Malignant disease | 149 |
| Medicine | 1,085 |
| Mentally deficient | 10 |
| Neurosurgery | 100 |
| Neurology | 136 |
| Psychiatry | 549 |
| Ophthalmology | 405 |
| Otolaryngology | 356 |
| Ophthalmology-otolaryngology | 80 |
| Orthopedics | 297 |
| Pathology | 436 |
| Pediatrics | 474 |
| Physical therapy | 101 |
| Radiology | 427 |
| Surgery | 1,089 |
| Plastic surgery | 49 |
| Traumatic surgery | 46 |
| Thoracic surgery | 68 |
| Tuberculosis | 303 |
| Urology | 201 |
| Mixed | 53 |
| Others | 58 |
| Total | 8,028 |

Information regarding postwar residencies and fellowships, basic medical science instruction, public health education and other postgraduate courses was requested from 1,267 institutions and agencies including 1,041 hospitals approved for intern and residency training. Replies have now been received from 641 hospitals, 55 medical schools, 25 departments of health, 23 state medical associations and 15 special societies and examining boards. The information obtained is most encouraging. It indicates clearly that constructive planning is under way and that institutions are anxious to cooperate to the full limit of their facilities. The Council recognizes that there will be opportunities for the development of additional high grade training programs in institutions that have not yet reached their full educational capacity. However, it does not wish to encourage the organization of new residencies, fellowships and postgraduate courses unless satisfactory facilities can be provided. While the survey is still incomplete, the following observations are of interest.

#### RESIDENCIES AND FELLOWSHIPS

How many residencies will be required to meet the demands of medical officers seeking advanced training after the war? There are many un-

TABLE 2.—DISTRIBUTION OF POSTGRADUATE COURSES

| Subjects | Number of Courses | Physicians Accommodated |
|---|---|---|
| General postgraduate courses | 24 | 1,447 |
| Allergy | 2 | .. |
| Anatomy | 4 | 28 |
| Anesthesia | 5 | 60 |
| Cardiology | 11 | 64 |
| Electrocardiography | 3 | 24 |
| Dermatology and syphilology | 5 | 12 |
| Clinical pathology and bacteriology | 8 | 55 |
| Biochemistry | 3 | 35 |
| Hematology | 4 | 27 |
| Pathology | 15 | 144 |
| Obstetrics | 8 | 283 |
| Obstetrics-gynecology | 7 | 41 |
| Medicine | 21 | 459 |
| Gastroenterology | 5 | 19 |
| Endocrinology | 3 | 10 |
| Malignant diseases | 1 | .. |
| Neurology | 3 | 50 |
| Psychiatry | 13 | 173 |
| Ophthalmology | 12 | 135 |
| Otolaryngology | 12 | 140 |
| Orthopedics | 4 | 6 |
| Pediatrics | 18 | 352 |
| Radiology | 14 | 33 |
| Surgery | 21 | 342 |
| Proctology | 2 | .. |
| Neurosurgery | 1 | 12 |
| Tuberculosis | 7 | 62 |
| Urology | 7 | 16 |
| Public health | 8 | 345 |
| Veneral diseases | 3 | 23 |
| Industrial medicine | 3 | 142 |
| Aviation medicine | 2 | 13 |
| Totals | 259 | 4,522 |

known quantities as regards the duration of hostilities, casualties among medical personnel, rate of demobilization, opportunities for permanent assignment in the Army and Navy, postwar subsidies and other economic factors. It has been estimated, however, that approximately 12,000 graduates of recent years are now serving in the armed forces whose previous training in civilian hospitals did not extend beyond the intern year. Perhaps 6,000 of this group will later seek hospital appointments. In addition there is the possibility that some 2,000 former residents may return to complete their original assignments or establish themselves in other specialties. Thus with a normal civilian complement of 5,500 residents the approved hospitals may be called on to furnish a total of 12,000 or 13,000 residencies in the immediate postwar period.

Can this demand be met?

Under normal conditions the 660 civilian hospitals approved for residency training supply facilities for approximately 5,500 resident physicians. In the present survey 545 hospitals report 8,028 residencies.

It is apparent from these figures that many institutions have almost doubled their educational capacity for postwar training. If this degree of expansion is maintained, it should be possible to develop the required twelve or thirteen thousand residencies in the approved hospitals, especially if the potentialities of the internship hospitals are also taken into consideration.

The distribution of residencies in the present survey is given in table 1.

### BASIC MEDICAL SCIENCES

There is evidence in the reports of the medical schools that careful attention is being given to the problem of supplying basic medical science instruction in relation to clinical specialties during the postwar period. Up to the present time 37 schools have indicated that facilities will be available for continued training in the preclinical fields. Twelve hospitals reported affiliations with medical schools to provide supplementary instruction in basic sciences, while 24 others indicated that courses of this type would be developed in their own departments of bacteriology and pathology. From the incomplete information now at hand it is apparent that 117 positions are available in anatomy, 124 in bacteriology, 135 in pathology, 96 in biochemistry and 123 in physiology.

### POSTGRADUATE COURSES

Information received from 60 hospitals, 26 medical schools and the various state medical associations and departments of health indicates that 259 postgraduate courses have been organized which can accommodate a minimum of 4,522 physicians. The capacity is obviously much larger than the number indicated, however, for the size of the class was not specified in connection with 133 of the courses listed. The distribution of these educational opportunities is shown in table 2.

This study of postwar educational facilities will be continued so that at the close of the war the Council expects to have ready for distribution a printed list of all educational opportunities available to returning medical officers and especially planned for them. The achievement of this goal will depend in large measure on a

continuation of the excellent cooperation of the hundreds of institutions which have been keeping the Council informed of their postwar plans.

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## NEW POLICIES GOVERNING DISCHARGES FROM THE ARMED FORCES

The War Department in regulations dated Dec. 15, 1943 has changed the regulations issued in November 1942 regarding discharges from military service, particularly as they relate to tuberculosis, neuropsychiatric disorders and malaria. The new regulations are as follows:

(1) No individual with a disability incurred in line of duty will be discharged on certificate of disability until definitive treatment has been completed, except those having tuberculosis or neuropsychiatric disorders. Types of cases which should be retained for treatment include those requiring skin graft, bone graft, revision of amputation stumps, closure of colostomy, etc.

(2) Individuals unfit for Army service because of neuropsychiatric disturbances will not be retained for definitive treatment but will be discharged and arrangements will be made for further care by the Veterans' Administration if such is indicated. Exceptions are those individuals with neuropsychiatric conditions incurred incident to the service who, in the opinion of the medical officer, may within a reasonable period be returned to duty within the continental limits of the United States.

(3) Enlisted personnel developing tuberculosis, unless terminal cases, will be transferred to Veterans' Administration facilities and discharged as soon as a definite diagnosis of tuberculosis and disablement for further military service are determined. Exception to this policy may be made in the case of personnel nearing completion of twenty years' service and noncommissioned officers of the first three grades when the prognosis is favorable for a complete recovery and restoration to duty within one year. Such individuals will be transferred to Fitzsimons General Hospital, or other designated Army hospital, for treatment.

(4) Terminal cases and those in which such transfer will endanger the patient's life or recovery will be retained in the service and hospitalized until death ensues or transfer to a Veterans' Administration facility becomes possible.

(5) Individuals will not be separated from the military service solely because of malaria, in the absence of permanently incapacitating residuals or sequelae such as marked splenomegaly or cachexia. Repeated relapses alone will not constitute a cause for separation.

(6) When the enlisted man is to be separated from the service on certificate of disability for discharge, irrespective of line of duty status, and further hospitalization is necessary, he will be transferred to a Veterans' Administration facility and will be discharged.

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## MANAGEMENT OF CONVALESCENCE FROM MALARIA

Circular Letter No. 197 concerns the management of convalescence from malaria and was issued by the Office of the Surgeon General, Washington, D. C., December 27. Otherwise healthy persons quickly recover from isolated attacks of malaria, and a convalescent period of two weeks is considered ample during which time sufficient rest, a well planned diet and progressively increasing activity, are usually the only measures necessary. Only when anemia is present is iron required. Patients who have had short intervals between a long series of attacks of malaria sometimes remain depressed and in a debilitated state for an excessively long time. Steps should be taken to aid convalescence in this group of cases. Diets should be planned to be attractive, appetizing and palatable in addition to containing the essential nutrients. Vitamin supplements such as cod liver oil and dried yeast tablets may be taken. The patient should enter a reconditioning program as soon as his condition permits. Activities should be both recreational and useful and should hold the patient's interest and keep him busy, mentally and physically. Boredom or undue fatigue should not be permitted, and the sense of usefulness and responsibility should be aroused and developed.

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## UNDERGROUND HOSPITAL AT CAMP JOSEPH T. ROBINSON

Underground hospitals are being built in some of our camps today so that the soldier, both medical and from other branches, will know exactly what to expect as a casualty overseas or as a medical attendant. Such a hospital, consisting

of three wards, has been built at Camp Joseph T. Robinson, Arkansas. This underground hospital (the 55th General Hospital), is a training project and is practically bomb proof. It has been dug and carved from the earth and sandstone of the military terrain. The interior is finished with solid board floors, ceilings and side walls covered with insulation, and electricity and plumbing which is available in the field behind the lines of battle. Each of the three wards, connected by underground passages, is approximately 7 to 9 feet high, by 30 feet long and 15 feet wide. Three tunnels connect the passageways with the outside. Three feet of dirt rock protect the roofs of the wards. The hospital is completely equipped with x-ray equipment, blood plasma banks and the latest resuscitation elements. The hospital has its own electric generator in one of the passageways and running water in each room. Ventilators reaching to the upper ground have been constructed to serve also as emergency exits, and with the use of a "short litter," a metal frame which fits around the back of the patient, casualties can be hoisted to the open air. Lieut. Col. Charles C. Gill is in command at the Camp Joseph T. Robinson Hospital.

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## ARMY GENERAL PRAISES NAVY DOCTOR

Lieut. Comdr. Herman F. Strongin, formerly of New York City and now stationed at Great Lakes (Ill.), was highly praised by Major Gen. Albert W. Kenner in a personal letter which read as follows: "It was my intention to bring to the attention of the Naval Task Force surgeon the efficient manner in which you administered to our men during the trip across and the assault phase of our landing at Fedala. You were extremely cooperative with the Army medical personnel and I have no hesitance in stating that because of your efforts our men were in excellent physical condition when they engaged the enemy. Because of the exigencies of combat and the fact that the fleet sailed before I had anticipated, I failed to express my appreciation formally, through official channels." Dr. Strongin graduated from George Washington University School of Medicine, Washington, in 1921 and entered the service on Jan. 22, 1942.

## TREATMENT OF VENEREAL DISEASE IN ARMY HOSPITALS

The treatment of venereal disease in army hospitals was recently discussed in Circular Letter No. 195, issued December 1 by the Office of the Surgeon General. Regardless of the specific type of venereal disease, the hospital management of patients with venereal disease ordinarily entails the use of diagnostic, epidemiologic and administrative procedures which are similar. In order to insure that these functions are well coordinated, the organizational charts for station and general hospitals will provide for a Venereal Disease Section. Since ordinarily each of the venereal diseases is now effectively treated by internal medication, making surgical or manipulative procedures rarely necessary, the Venereal Disease Section should be organized as a unit of the medical rather than the surgical service. In hospitals under construction and subsequently authorized, the staff organization will conform initially to this policy; in existing hospitals where the Veneral Disease Section is not already a unit of the medical service it will be transferred thercto unless, because of local conditions, such transfer would clearly be prejudicial to the most efficient care of patients with veneral disease.

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## DISPOSITION OF PERSONS WITH NEUROPSYCHIATRIC DISORDERS

Circular Letter No. 194, issued December 3 by the Office of the Surgeon General, is concerned with the disposition of persons with neuropsychiatric disorders. At the present time over 45 per cent of the certificate of disability discharges are for neuropsychiatric reasons. The importance of eliminating actual or potential neuropsychiatric noneffectives has not diminished. However, the possibility must be considered that neuropsychiatric criteria for service are now being interpreted too strictly and men are being separated from the service who could be of value were they retained. Each case must be evaluated individually and disposition made on the basis of clincila judgment as to the individual's potential value to the service. It is well established that a large proportion of men developing psychiatric disorders, particularly in combat zones, if properly treated and promptly returned to duty, recover entirely and render

valuable service. Any one, no matter how sound his personality, may develop a psychiatric disorder under certain circumstances and will recover, if properly treated, when these circumstances are changed or when he has had an opportunity to adjust to them. An attempt should be made in each case to determine when the psychiatric disorder is merely the natural result of fatigue, misassignment or a distressing situation, or whether it is a manifestation of fundamental neuropsychiatric unsuitability for military service. Where the psychiatric disorder is believed to arise more from indifference toward the war than from fundamental instability of personality, the individual will be retained for service. Disposition of neuropsychiatric cases may be any of the three following:

1. *To full duty.* Individuals who, after careful study by examining medical officers, are believed to be of potential value at full duty in combat zones regardless of the psychiatric diagnosis which has been made will be returned to duty.

2. *To duty of less arduous nature than full duty in combat zones.* Individuals who, after careful study by medical officers, are believed to be noneffective for combat duty but potentially capable of serving in less arduous assignment, either in continental United States or overseas, will be returned to duty with a recommendation to this effect.

3. *Separation from the service.* (*a*) Individuals who, after careful study, are believed to be of no further value to the service because of the presence of psychosis, psychoneurosis, epilepsy or organic neurologic disease will be separated from the service under the provisions of section II, AR 615-360. (*b*) Individuals who, after careful study, are believed to be of no further value to the service because of the presence of mental deficiency, psychopathic personality or primary behavior disorders (such as chronic alcoholism or drug addiction) will be discharged under the provisions of section VIII, AR 615-360.

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## PHYSICIANS SUBJECT TO EMPLOYMENT STABILIZATION PROGRAM

The War Manpower Commission has recently announced that physicians, dentists, veterinarians, sanitary engineers and nurses who are salaried employees in essential or locally needed activities are hereafter subject to the same provisions of any employment stabilization program as applies to other workers in such activities. Such professional employees may not change their jobs without securing statements of availability from the United States Employment Service or being referred to new jobs by this service. The Employment Service, however, it was emphasized, will make referrals of such employees only after consulting the state chairman of the Procurement and Assignment Service. This procedure, it was explained, will insure referral of these professional workers to jobs in which they can make their most effective contributions to the war effort. On approval of the regional war manpower director, any state director may delegate the duty of referring such employees to new jobs to the state and local offices of the Procurement and Assignment Service.

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## FEDERAL FUNDS FOR RELOCATION OF PHYSICIANS

Preliminary steps have been taken to make effective the authority recently granted by Congress to the Public Health Service to provide financial aid to civilian physicians who will agree to relocate to critical areas. Herewith is reproduced a letter sent to all state health officers by the service, under date of January 12, concerning the program. A similar letter has been sent by the Central Office, Procurement and Assignment Service, to all state chairmen of the Procurement and Assignment Service. It is understood that the details of the program will be worked out in the near future. The letter follows:

"Public Law No. 216, 78th Congress, approved by the President on December 23, 1943, appropriates to the United States Public Health Service the sum of two hundred thousand dollars ($200,000) during the fiscal year ending June 30, 1944 for the relocation of private practicing physicians and dentists. This act provides in part as follows:

" 'Provided, That the Surgeon General is authorized on application of a municipality, county or other local subdivision of government duly approved by the state health department having jurisdiction over said municipality, county or other local subdivision of government to enter into agreements with private practicing physicians and dentists under which, in consideration of the payment to them of a relocation allowance of not to exceed $250 per month for three months and the actual cost of travel and transportation of the physician or dentist and his family and household effects to the new location, such physician or dentist will agree to move to and engage in the practice of his profession in such area for a period of not less than one year: Provided, however, that no such contract shall be made with any physician or dentist unless such physician or dentist shall be admitted to practice by the state authority having jurisdiction of such new location: Provided, further, That each such applicant subdivision

shall contribute 25 per centum to the total cost of such relocation allowance, travel and transportation costs of each such physician or dentist and his family obtained by said applicant.'

"It is to be noted that this act provides:

"1. That a municipality, county or other local subdivision of government may submit an application to the Surgeon General for the relocation of a private practicing physician or dentist in the applicant subdivision.

"2. That such application must be duly approved by the State Health Department having jurisdiction over said municipality, county or other local subdivision of government.

"3. That the Surgeon General on receiving such application is authorized to enter into an agreement with a private practicing physician or dentist under which, in consideration of a relocation allowance of not to exceed $250 per month for three months and the actual cost of travel and transportation of the physician or dentist and his family and household effects to the new location, such physician or dentist agrees to move to and engage in the practice of his profession in the applicant subdivision for a period of not less than one year.

"4. That no such contract shall be made with any physician or dentist unless such physician or dentist shall be admitted to practice by the state authority having jurisdiction of such new location.

"5. That each such applicant subdivision shall contribute 25 per centum to the total cost of such relocation allowance, travel and transportation costs of each such physician or denist and his family obtained by such applicant.

"The State Procurement and Assignment Service has already determined that certain areas in your state are in need of additional physicians and/or dentists. A list of such areas is attached. It will be helpful to the Public Health Service if you, in consultation with state chairman, Procurement and Assignment Service, will reexamine these areas as to their present status. If the need exists it is suggested that you rate them in order of urgency. Possibly the areas listed do not include all the needy communities in your state and others may have been brought to your attention which should be added.

"While the state health officer must approve the application from any community made under this act, the State Procurement and Assignment Service chairman has the responsibility of determining which physicians (or dentists) are available for relocation.

"Detailed information together with application forms for use by subdivisions wishing to apply for the relocation of physicians and dentists will be forwarded to you in the near future.

"Similar letters are being sent by the Central Board, Procurement and Assignment Service, to the chairmen of the State Procurement and Assignment Service advising them of the availability of these funds for relocation purposes.

"Your cooperation is solicited in bringing this legislation to the attention of eligible communities."

## NATIONAL REGISTRATION FOR NURSES POSTPONED

The Directing Board of the Procurement and Assignment Service issued form 328, dated January 1, to state chairmen for nurses, stating that the national registration of nurses planned for the week of February 7 has been postponed indefinitely, owing to circumstances beyond the control of the War Manpower Commission. States are requested not to hold a registration of their own until the status of the national registration is determined. It was also stated that a draft of nurses for military service is not contemplated.

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## STUDY REQUIREMENTS OF PERSONNEL FOR ADMISSION INTO THE ARMED FORCES

The following physicians were appointed by the President as members of a commission to study and report on the requirements of personnel for admission into the armed service:

Rear Admiral Ross T. McIntire, Surgeon General of the Navy, Washington, D. C.

Major General Norman Kirk, Surgeon General of the Army, Washington, D. C.

Dr. Alan C. Woods, ophthalmologist in chief, Johns Hopkins Hospital, Baltimore.

Dr. Frank H. Lahey, surgeon in chief, Lahey Clinic, Boston.

Dr. Edward A. Strecker, professor of psychiatry, University of Pennsylvania, West Philadelphia, Pa.

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## WORK OF NAVY MEDICAL CORPS PERSONNEL ON TARAWA

With the aid of three navy medical corpsmen, Lieut. Herman R. Brukardt, formerly of Menominee, Mich., is reported to have treated more than 100 men in a "pill box" hospital, with only four casualties, during the first thirty-six hours after marines struck the Japanese Gilbert Islands' bastion. The little pill box hospital was situated directly on the front lines the first two days of the brief but bitter Tarawa fighting. But despite the fact that constant Japanese machine gun bullets thudded in the little doorway, the naval crew refused to relax its efforts to save Leatherneck lives. Many of the marines with slight wounds remained around the pill box for hours helping carry the more seriously wounded in to the doctors.

# Original Articles

## THE JAPANESE AS I KNOW THEM

The Honorable H. H. Thomas,
British Consul, Chicago

In the limited time which I have, because I must not, of course, go on for too long or you might start throwing things at me, I shall only be able to touch on the high spots; for I could talk for hours about the Japanese as I know them, though I don't pretend that I know all that there is to be known about the Japanese, because nobody does that. The more you get to know them, the less in many ways you feel that you do know them.

It was fifteen years ago last January that I arrived in Japan for the first time. I left Shanghai in August of last year, having spent some four years as Consul for Japanese Affairs at our Consulate General there in Shanghai, where my work was solely concerned with dealing with Japanese officials and Japanese officers, who were often extremely unpleasant, for the Japanese authorities were using every means short of war at that time, before Pearl Harbor, to drive out British interests and American interests from Shanghai and from China generally. Then, of course, for the last eight months I was sitting in Shanghai in so-called protective custody waiting to be exchanged. So that I do feel that, as I have already said, I have got to know something about the Japanese, and I have very definite views about them.

What I would like to say is this: that I can vividly remember even to this day, and I shall never forget, my very first impressions of the Japanese. First impressions are not always accurate, yet sometimes they are so in a peculiar sense, and I feel that my first impressions of the Japanese were amazingly accurate. I very quickly lost them and later formed different views which were again modified as time went on; but my very first impression, when as a somewhat starry-eyed young man, full of wonder and enthusiasm, I saw Shimonoseki for the first time *en route* to Tokyo, was that I was struck with a peculiar and rather horrible sense that here were a race of people that were somehow cut off from the rest of the world, that were different as no other race of people I had seen were different.

I had come by way of Bombay, Colombo, Singapore, Hongkong and Shanghai. I had seen some strange sights and strange peoples; but for the first time, when I saw the Japanese, I felt that here was a race apart. It was almost like seeing people from another planet — Martians perhaps. I remember seeing the men and women on the coal barges, running up and down, very efficient, very hardworking, dressed in their short, close-fitting coolie jackets and tight-fitting pantaloons, and on their feet the most curious looking shoes in which the big toe was separate from the rest of the foot. It is something like a cloven hoof and it gives them a sort of diabolical appearance on first sight. Those were my first impressions.

My job at first was to apply myself to the study of the Japanese language. It is said that if you study the Japanese language long enough you go mad. I like to think I did not study it long enough, but I sometimes wonder.

I remember when I first arrived in Tokyo a little incident that served to spur me on to

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learn Japanese. I found upon arrival in Tokyo that I had lost the only suspenders I possessed, so it became incumbent upon me to do something about it. I went around to find some suspenders, or "braces," as we call them in England. So I went into a shop and there was a charming Japanese girl serving there. She came up and bowed and smiled and welcomed me in. I said, "Could you let me have some braces?"

She looked at me, obviously puzzled. I suppose if she knew English at all she would know them under the word "suspenders" — she would know American English and not English English. Then comprehension dawned upon her and she looked at me rather hard for a moment and smiled again and away she went. She came back with a box that she put in front of me. When she opened the lid, imagine my youthful embarrasment when I found a particularly luscious pair of brassiéres. I beat a hasty retreat and made up my mind that I had better learn some Japanese so that I could ask for suspenders in Japanese in the future.

Anyhow, as I say, I then got to know a lot of Japanese people. In trying to learn a language, one mingles and meets with all kinds of people and, of course, I began to feel that I was getting on very familiar terms with them and that they were human beings really and not so strange perhaps as some people made out. I found, for instance, that the Japanese people, particularly the country folks, the peasantry, were kind, apparently, and hospitable; they received strangers well in their midst. They had, in fact, as I came to discover afterwards, all the savage virtues; because you find those virtues even among tribes of cannibals, I am told.

The fact is that the Japanese are in many ways a savage people, with a savage strain in them, and to understand that it is necessary to understand something about their past history, their national background. It is necessary to know that throughout the ages the soldier has had the predominant role in Japanese society. It was the feudal lord and his retainers, the men who were entitled to wear the two swords, who were at the top of the social organization. The priests and the farmers and peasants and, lowest of all in the social scale, the merchants, tradesmen and shopkeepers, all came far below. The feudal lord could wreak summary justice upon any inferior order of man who offended him. He had power of life and death and there was no recourse against it. This goes back over thousands of years and it is absolutely deep rooted in the Japanese to this day.

Remember that you only have to go back to the 1850's to get back to feudal times in Japan —before Commodore Perry battered down the walls that Japan had put up between herself and the rest of the world.

I am trying to hurry over all of this introductory part, but you do remember, don't you, that for over 200 years under the military dictators — because Japan had a military dictatorship a long time ago — for over 200 years Japan was literally cut off from the rest of the world. Practically speaking, no Japanese were allowed to go abroad; except a very, very few under special license, no Japanese, under pain of death, were allowed to go abroad and trade abroad, even to Canton or the Philippines. No foreigners were allowed to travel in Japan; only a limited few foreign traders, Dutch and British, were allowed to come to Deshima, an artificial island at Nagasaki, where they lived under conditions of internment and carry on their trade there. So that, practically speaking, for that time the Japanese were cut off, and you can obviously, I think, realize that that episode, that period of their history, must have had a profoundly formative effect upon their national character.

It did, of course, make them have this sense of apartness from the rest of the world; and that is enhanced by the fact that when they emerged into the modern world the men who became their leaders and who shaped their policy were inevitably these same feudal lords, who, incidentally, had overthrown the Shogun dictator because he kept them under his sway and did not allow them liberty or power. He made them come to his capital in Tokyo and he made them spend large sums of money so that they should not have power, etc., so they overthrew their military dictator and they brought their Emperor out of obscurity. The Emperor throughout hundreds of years had lived in retirement. He had been a sort of high priest. But at the time of the restoration, at the time of the revolution that they had after the western world had come clamoring at their doors, they brought the Emperor out of his retirement and set him up as the center and gave him theoretical temporal power

again. In fact, the first modern Emperor — that is to say the great Emperor Meiji who was restored — he, himself, was a man of considerable sagacity and he was a good deal more than a puppet; but the two Emperors after him have been purely puppets. The wretched Hirohito is a complete puppet and it is the men around the throne that have the power.

What I started to say was that it was these feudal lords who seized the reins of power. They had a lengthy and ancient tradition of fighting, they could only think in terms of warfare. Throughout Japanese history there had been bloody, internecine struggles. All their legends dealt with fighting, with the power of the sword, the might of the warrior. What is more, they extolled the virtue of loyalty as it was understood by the Japanese, and loyalty covered in ancient times in Japan, as it covers today, a multitude of sins. Anything was excused in the name of loyalty.

If you were being loyal in ancient times to your feudal lord you could legitimately, righteously have recourse to the blackest treachery, to the utmost cowardice if it was in the cause of loyalty; and the stories that their children are fed upon are full of the most bloody and most treacherous episodes, which are extolled and which are looked upon by the Japanese as being wonderful, beautiful, marvelous, and to be praised and to be emulated.

That, of course, explains why no Japanese could be brought to see that the blow they struck at Pearl Harbor was a treacherous stab in the back; a blot on the history of Japan, disgracing them in the eyes of all civilization. To all Japanese it was a shrewd blow struck at the enemy on behalf of the Emperor. It was a master stroke of the accomplished warrior.

Therefore, you see, these feudal leaders, having this background of war and of violence, deliberately embarked upon a policy of conquest for Japan. It was obvious to them, and they were justified in assuming that, in order to take a part in the modern world they must strengthen their defenses. That was all right, that was legitimate; but they went a good deal further and they evolved a doctrine which they have come more and more to believe. There has been more and more written during the past fifty years about this sort of thing, until they have evolved a whole national philosophy which is based upon the theory of the divine destiny of Japan. There is a tremendous amount of literature that has been written upon it.

In order to bring this about, and also to magnify the figure of their Emperor, they brought their ancient legends out of obscurity and developed them, they delved into their history and they brought out all the ancient stories about their Emperor that had died and been forgotten. They revived the Shinto literature and Shinto religion. Shinto is a kind of mixture of ancestor worship, nature worship, Emperor worship that has grown up through the ages. They found stories of the Sun Goddess, and the Sun Goddess, you know, was the mother of the gods. The first Japanese Emperor, Jimmu Tenno, was supposed to be descended from the Sun Goddess and to have come down to establish his eternal dynasty of Japan 2,600 years ago. They also found that the Japanese themselves were in lesser measure all supposed to be of divine origin.

Well, those stories they have promulgated and those are the stories that Japanese children are first taught when they begin to learn to write and to read. In Japan everything is strictly controlled. Throughout the length and the breadth of the land all textbooks are alike. Every child studies the same textbooks devised by the authorities to teach them what they ought to know; and so they all from their earliest days absorb these stories of the divine emperor, the divine race of the Japanese, entirely different from the rest of the world, and the divine mission of Japan.

They say that the Emperor Jimmu Tenno (who, in fact, in so far as he ever existed at all was probably an entirely savage tribal leader who came up from somewhere in the South Seas with savage tribes, and possibly cannibal tribes, and eventually established a foothold in Japan; but the Japanese say he was a god) he looked around Japan and said "Hakko Ichiu" — "Four corners and one roof," and he said, "I will have one roof over this land." And so they say in modern times Japan looks around the world and says "Four corners, one roof," the one roof of Japan over the four corners of the earth.

To proceed, they taught this in their schools, but that is not the whole of the picture. This is a point that I want to try to get over to you, and it is so difficult; it is so difficult for anybody

who has not lived in a totalitarian country where all thought is controlled to understand the power of that sort of thing. But what I want to try to get you to realize is how different the Japanese mind is and how it is molded. No book can be published, no newspaper can be published without first being censored in Japan. What is more, no public meeting like this could be held without a policeman present. Nobody can go to the movies without supervision, for at every movie in Japan there is always a policeman present just to see that everything is all right. Nobody can own a short-wave radio set; it is against the law, punishable by the most heavy punishment — nowadays death in many cases, or life imprisonment. You can only have a long-wave radio and listen in to the government broadcasts over government stations.

What is more, over a number of years the police have had powers of summary arrest of anybody in Japan accused of — and what do you think? . . . of dangerous thoughts. Dangerous thoughts! Your thoughts are not your own in Japan. You don't have to utter them; you just have to have them in your head. Not dangerous *speech,* dangerous *thoughts,* and the police have exercised that power time and time again. They have arrested hundreds and thousands, particularly young students accused of being or thought to be slightly radical.

God knows how they could be radical under such conditions, but of course the light does manage to creep in through the chinks somehow or other. Some Japanese do get abroad and they smuggle back all sorts of things, the writings of Karl Marx and so on, and many hundreds and thousands of students, men and women, have been arrested for no more serious a crime than having dangerous thoughts, and they have been held for months and months in those dreadful Japanese prisons. They have been put through the third degree until they have emerged the completely willing tools of their masters, ready to go and fight in the great cause of divine Nippon and do exactly what they are told.

Therefore, the Japanese people as a whole unquestionably do believe that their Emperor is divine, that they themselves, are of divine origin, and that their nation has a divine mission in the world: to rule the world.

I'd like at this point just to branch off for a moment and refer to another aspect of Japanese character that it is so important for us to realize, and that is this: the more you mingle with the Japanese, the more you meet them, the more you begin to feel that no Japanese can stand on his own feet — just as no Japanese has any abstract conception of right and wrong, because everything is related in his mind to the Japanese national structure, and a thing is right if it is for Japan, but the same thing is wrong if it is against Japan. You see, there is no abstract standard at all. Everything is related to the national welfare, and in exactly the same way no Japanese can stand on his own feet as an integral human being. All Japanese seem to be facets of the Japanese national structure. They are more like ants than human beings in that way.

The family system is very strong in Japan. In Japan no young man chooses his own wife; she is chosen by the family council, and so on. Consequently, no Japanese can stand alone.

It is very annoying when you are dealing with them. I found time and time again in Shanghai, for instance, if I wanted to make representations about some outrage that had been committed by the Japanese I could never find one responsible official to talk to. You had to talk to a committee; there would be several of them and you would talk to them as a body, and they would form their opinion as a body. No one person would take responsibility.

That is both their strength and their weakness. They have no sense of individuality; but they are capable of subordinating their individual desires to a remarkable degree. It leads also, of course, to a remarkable lack of initiative.

I remember the story that was current — and I think it was true, too — in Yokohama many years ago. In Yokohama there are little inlets which we foreigners used to call creeks, and one day a drunk fell into one of these creeks and the unfortunate fellow drowned. He lay there for days, half in and half out of the water, and some of the foreigners began to say, "Why on earth isn't he taken away by the police or something done about it?"

The story was that the Water Police said it was not in their jurisdiction because the corpse was on land; the Land Police said the lower part of the body was in the water and it was up to the Water Police.

Anyhow, the Japanese, believing in their divine mission, also naturally believe that every-

thing that their Emperor, everything their authorities do, everything that is done in the name of the national policy is divine and right. If it is divine, it is divinely right and must triumph, must come about. That is why they accused us, the British and the Americans, in China, of being insincere, of being wicked, because on occasion we dared to utter critical words about the Japanese national policy, and they firmly believed that to do so was unforgivable on our part.

Another thing that it is important to know is that the Japanese man is taught from early childhood to believe, and obviously does believe, that the highest consummation of a man's life is to die fighting for the Emperor. If you die on the field of battle you become a god, you enter the national pantheon, your spirit is revered for a thousand years. That is a tremendous motive. On the other hand, as a corollary to this, if you surrender on the field of battle to the enemy your name goes down to scorn and obloquy, you bring shame upon your family, your name is erased from the family tablets. That is a tremendous deterrent.

I am not pretending that the Japanese are braver than anybody else. They are not. In fact, I think in many ways they are less brave. They are cowards, like all bullies — because they *are* bullies. But those are tremendous motives. It is a kind of fanatical urge, you see. If you believe that to die on the field of battle will bring your spirit to deification forever that is a tremendous motive, particulary if life is not so awfully well worth while, as it is not to the Japanese. Life is not a particularly happy business. It can't be given the conditions under which they have been living. They have been undergoing hardships that can hardly be imagined by us comfortable people of the western world, and life is a grim and dour sort of prospect for the average Japanese. All they've got to buoy them up — and it does buoy them up — is this fanatical feeling about the divine cause and the national mission.

Also at this point I think I would like to mention the suicidal tendency in the Japanese; because that is a very dangerous tendency. It is a national tendency amongst the civilian population. For years past the suicide rate has always been extremely high, and they have committed suicide, and they do commit suicide, over things which to us seem trifling in the extreme, but to them are very real. But they haven't the same values with regard to life as we have.

There is a story which illustrates the curious attitude they have towards death. It was told in Shanghai and was very current there. There was a big block of apartments called Broadway Mansions, at one time British owned, and a lot of Japanese tenants, even in those days, used to live there. It appears that one night some British and Americans were giving a party and, as the night wore on, the party got a little wild, and they begin making whoopee, and there was a lot of noise going on. Suddenly the telephone rang and when the host went to answer it he heard a voice saying, "Excuse me, this is Mr. Yamamoto, I live in the flat above you. My wife she is very, very sick, you must not make so much noise."

The fellow said, "I am very, very sorry; we will try and pipe down."

In due time the telephone rang again: "Mr. Yamamoto speaking, if you do not stop making this noise, my wife is very, very sick, I will call the police." So the party managed to keep quiet.

The telephone rang again: "Mr. Yamamoto speaking again. Please, you may now make noise; my wife is not sick any longer, my wife is dead." So it was all right for them to go on with the party.

Those are a few highlights of the Japanese character. They have deliberately embarked upon a policy of no less than world conquest; let us not blink our eyes to that.

I haven't time to go into aspects of life under Japanese rule, what they have done, for example, in occupied China. Wherever they go they bring a blight with them, there is no question about that. The so-called New Order in East Asia, the great "Co-prosperity Sphere" is a horrible thing to contemplate and death would be preferable to life under such conditions. But as a kind of postscript to my remarks before I sit down there are two points I should like to touch on.

First of all, and I am going to be frank, there is at the present day a great deal of nonsense being talked in this country (and I have no doubt that it is inspired by the enemy) suggesting that it is the obvious course and the obvious duty for America to disengage herself in

the struggle with the Nazis and turn her whole attention to Japan.

From what I have said I think you will realize that I don't underestimate the Japanese — they are a dangerous and implacable and ruthless enemy, a dreadful enemy — but nothing could be more futile and fantastic than to contemplate at this moment, when we have at last begun to get the upper hand of the Nazis in Europe, to think that the Americans should suddenly disengage themselves and allow the Nazis to have a breathing space.

At this moment there is possibility of all the large industrial centers in this country being raided by air. It is only a possibility, it is not a probability because the Germans are very, very deeply engaged elsewhere; but if we let up on them, if they are allowed to have a breathing space, if they are allowed to build up their aircraft production, think of what they will do. Instead of us invading Europe they will invade Great Britain, and, what is more, they will try to deal knockout blows on the industrial centers here by raids from the air. The Nazis are a dangerous enemy, and now that we've begun to get the upper hand on them, surely we must go ahead and finish the job.

That is not to say that the Japanese are not also dangerous, but this is after all a global war. It is one problem. It is all linked up together. We are fighting the forces of evil wherever we find them, and we are pooling our resources and we are applying the pressure where it can be most efficiently and effectively applied. It would be quite impossible suddenly to switch over and treat the Japanese as the only enemy. Obviously, the quicker we can apply more pressure to the Japanese the better. We must not allow them to establish themselves.

That brings me to the second point on which I feel very strongly. I have lived in the Far East. There is a rumor, again inspired by our enemies, that is being given far too great a currency in this country, and that is that when the struggle in Europe is over, as it will be over, when the Nazi is finally controlled and beaten down, the British for some inexplicable reason will quit and leave the Americans the mess in the Far East.

Nothing could be more fantastic than that. How do you think I felt when I came away on their Japanese exchange ship and I came to Singapore — Singapore that I had known under British rule and where I had seen what a splendid job they had made of it — how do you think I felt when I saw those dirty little people crawling around over Singapore?

That is how we all feel. When we were attacked by Japan, just recall what we had been through — just recall our position. For over a year we in Britain had stood alone, the bastion of democracy. I don't think there is any question about that. We had given America time to prepare for the inevitable struggle, because I think there is not a person in this room that does not know that if we had been overwhelmed America was down next on the list for Hitler. At the time of Dunkirk, after the fall of France, we had suffered the loss of practically all our military equipment. We had extricated our armies but we had lost most of our equipment. I believe I am right in saying that immediately after Dunkirk we only had two fully equipped divisions in the whole United Kingdom. One of those had to be sent out of the country, although invasion stared us in the face, to the Near East to defend the Suez Canal.

We then organized ourselves. We never gave up hope. We never for one moment contemplated the possibility of defeat, and we organized ourselves and we increased our production tremendously.

You see, by that time Russia had come in and it was clear to us that we must give Russia the sinews of war. We sent Russia thousands of tanks, thousands of airplanes, and later, as American production was increased, America also was sending thousands of tanks, thousands of airplanes to the Russians. They needed every one of those, and what we could spare from Russia we were sending to the Near East, to Egypt. Remember, the Germans got within 60 miles of Cairo. It was a near thing. That was the time when the Japanese struck.

Well, it must have been a great temptation to divert some of those tanks, some of those airplanes from Russia and from the Near East. Our leaders wished to defend what was after all, our own soil, our own territory where our own flag waved. But they knew that to dissipate our strength was to lose all and, therefore, they suffered humiliation and loss in the Far East in order to hold the lines nearer home.

That is why inevitably it has fallen in a larger measure upon America hitherto to contribute to the war in the Far East. But we British have long memories. We don't talk over much about the things that touch us deeply, but we have not forgotten. We have not forgotten the humiliations we have suffered in Malay, in Burma, etc. We are determined to get back, we are absolutely determined, and there is no question in my mind that we are in this thing to the very end.

Just as we know the peril of Naziism, we also know the Japanese peril. We know that we cannot afford to stand on one side. They must be beaten. They must be beaten until there is no question in the mind of any Japanese that they have been miserably deluded by their military leaders. We are in this thing to the end, until shoulder to shoulder we walk down the streets of Tokyo and we beat down the Japanese military might so that it can never rise up again.

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## SHORT CUTS IN ENDOCRINE DIAGNOSIS AND THERAPY

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The vaguer reaches of endocrinology are quite nebulous and the diagnosis of some endocrine disorders difficult and uncertain even with the extensive laboratory facilities available only in research institutions and the larger hospitals.

While some of these disorders are of great scientific interest because of their rarity, they are of comparatively little importance from a social and economic standpoint. For example, in Illinois with a population of 7,000,000, Addison's disease causes only about 25 deaths each year. Less spectacular conditions are far more common and consequently are of greater importance in these days of manpower shortage because they are responsible for an astonishing amount of physical and mental retardation.

Some of these can be recognized with a fair degree of certainty and adequately treated without recourse to much laboratory data. I should like to discuss some disorders in which this may be done with the facilities possessed by, or available to, practically all practitioners. These statements should not be understood as underestimating the value of a good laboratory nor as a complete diagnostic survey of the endocrinopathies mentioned.

Those to be discussed are hypogonadism in children, with or without obesity; hypothyroidism; some phases of hypopituitarism; and the menopause. I shall refer to certain errors commonly made which are responsible for a failure in diagnosis or treatment or both.

*Hypogonadism in non-obese children.* In most cases and particularly during the war it may be assumed that the condition is due, in part at least, to pituitary and thyroid deficiency. Treatment should consist of thyroid in tolerance doses. This point can be determined only by testing the patient's response to gradually increasing doses.

It is said that during the administration of thyroid the BMR should be checked frequently. In happier times that would be desirable, particularly with some types of patients. It is rarely absolutely necessary, and for the duration may be ignored. The patient should be seen at least once a week and the adequacy of dosage may be controlled by noting the following items: tachycardia, tremor of tongue or outstretched fingers, heart consciousness, any complaint of nervousness or insomnia. Should any of these signs or symptoms appear or be reported, reduce the dose 25 per cent and continue.

If thyroid is given to young girls, the menstrual periods should be carefully checked. Occasionally periods of amenorrhea develop without signs of hyperthyroidism. When the menstrual periods are disturbed, the medication should be stopped until the irregularity disappears.

Anterior pituitary extracts or gonadotropins should be given in the same way as to the obese.

Considerable argument goes on now regarding obesity and hypogonadism in children. Many contend that no endocrine factor is present or at least demonstrable in the obesity and, that these conditions will clear up eventually without treatment. From a strictly scientific standpoint, these views may be correct. From a clinical viewpoint and for the duration, both contentions are wrong. It seems certain that many of these children overcome their handicaps without assistance. Certainly a great many do not. With the latter the opportunity for correcting their de-

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fects has been lost or their chances for recovery greatly lessened by waiting to see what nature would do. In my opinion treatment should be started as early as the tenth year — in severe cases, younger — and continued till the defects are corrected.

Practically every fat youngster with hypogonadism needs treatment as follows:

They all require thyroid. Begin with one-half grain per day. See them once a week and at each visit look for signs of over-dosage as already enumerated. Each week the dose may be increased by one-fourth grain per day till a dose is reached just short of that which produces any of the signs mentioned.

They all need posterior lobe extract. To older children this may be given sucutaneously twice a week in doses just short of those causing annoying intestinal cramps, nausea or faintness. To younger children the posterior lobe may be given in doses of one-tenth to one-fifth grain t.i.d. in enteric coated pills.

To children of average height or less, give anterior pituitary extract 0.5 cc. twice a week. This may be given in the same syringe at the same time with the posterior lobe extract. Young children may take anterior lobe by mouth in doses of two and a half to five grains t.i.d.

Children of more than average height and rapidly growing may have, instead of the anterior lobe extract, some gonadotropic preparation such as A.P.L., Follutein, Antuitrin-S, etc., in doses of 50 to 100 units twice a week. These also may be given in the same syringe with the posterior lobe extracts.

After two or three months the frequency of injections may be gradually reduced and finally stopped as the child reaches normal development. Even then supervision should continue with three or four visits a year until after puberty and it becomes certain that no regression will occur.

Certain precautions should be observed. Watch for signs of hyperthyroidism and discontinue thyroid for two or three weeks should such signs appear. When it is resumed, it should be in smaller doses as already mentioned.

Inspect the genitalia every month or two to guard against precocious development. Should growth seem too rapid, stop the gondotropin or anterior lobe extract, whichever is being used, for a month or so; longer if growth continues at a normal rate.

Examine the urine occasionally for sugar. Glycosuria sometimes follows the administration of the gonadotropins.

These preparations are said to hasten closure of the epiphyseal lines. This danger is probably overemphasized, but is one of the reasons for not using them in children of less than average height.

In pituitary deficiencies, the history contributes almost as much information as may be had from other sources. In hypothyroidism the physical findings are more important while in other endocrinopathies the history and the physical findings plus a therapeutic test may practically settle the diagnosis.

The victim of hypothyroidism gives a history of physical and mental retardation. He is sensitive to cold and enjoys hot weather. The administration of thyroid soon brings relief of some symptoms.

In hypoadrenia the patient is sensitive to cold but is also adversely affected by hot weather. The administration of suprarenal by mouth in doses of five grains t.i.d. will often relieve some symptoms within one week. Thyroid aggravates the symptoms.

In hypopituitarism the victim is not particularly sensitive to temperature. The injection of 0.5 cc. anterior pituitary extract will relieve some symptoms within an hour.

The obese youngster who gives a history of nocturnal enuresis being delayed beyond the usual age or having stopped for a few years and then being resumed about the age of eight or ten, will in nearly every case be helped by a course of pituitary and thyroid therapy.

Hypopituitarism is a very common disorder. It is responsible for an astonishing amount of reduced physical and mental efficiency. It is nearly always associated with some degree of hypothyroidism. Results of treatment are better if the patient is given tolerance doses of thyroid.

The woman victim of hypopituitarism, particularly if she is obese, often gives a history of having been a small baby weighing six pounds or less at birth. She began to walk and talk and got her teeth on time or even early. She was thin, perhaps underweight, until puberty or until

after some infection (such as mumps, measles or scarlet fever), marriage or pregnancy. Her menstrual periods were a little late in onset The first period may have been a menorrhagic-affair followed by an amenorrheic interval of several weeks terminated by another profuse period. She was unable to nurse her babies or could do so for but a short time, but obesity and the other symptoms of hypopituitarism — headache, fatigue, nervousness, irritability, lack of concentration — were exaggerated after each pregnancy.

A therapeutic test helps confirm the suspicion of hypopituitarism. The injection of 0.5 cc. of anterior pituitary extract, less often posterior lobe extract, will in most instances relieve headache if one is present and be followed by a sense of strength and well-being and temporary relief of many symptoms.

There is considerable literature on hyperthyroidism and a comparatively small amount on the counterpoised state of hypothyroidism, which is much more common. Its recognition should occasion but little difficulty if a few points are kept in mind. Most of its victims will have noted some mental and/or physical retardation before they consult the doctor. Often they are tired on awakening, feel better after an hour or two and then soon tire out with the day's tasks. They are sensitive to cold but enjoy hot weather. They are subject to many vague aches, pains and disabilities. Hypothyroidism has been mistaken for brain tumor, tabes, neuritis, arthritis, peptic ulcer, cholecystitis, nephritis, pernicious anemia and neurasthenia.

Whatever can be easily done to rule out these conditions should be undertaken at once. But before subjecting the patient to the expense and inconvenience of a gastro-intestinal or gall bladder study or to the ministrations of the neurosurgeon, rule out hypothyroidism. A BMR and blood count are helpful, of course, but not absolutely necessary. Suppose the patient is a harassed farmer or a busy war worker who can come to the doctor's office only in the evening — when laboratory facilities are rarely available. The history as indicated is helpful. The physical examination will offer much confirmatory evidence. A therapeutic test will in a few weeks go far toward settling the diagnosis. Give to an adult one grain of U.S.P. thyroid per day. A week later check for signs of overdosage already mentioned. If none of these are present or reported, increase the dosage to 1½ grains per day. See the patient at least once a week, noting the items mentioned. If the symptoms begin to clear up on this regime, it may be cautiously followed for some time, keeping the dose of thyroid just below the amount which causes tachycardia or the other signs enumerated. In this way the patient loses no time from his work and no demands are made on depleted hospital or laboratory personnel.

*The Menopause.* Some argue that no treatment should be given for menopausal symptoms until or unless an excess of androgens has been demonstrated in the urine. This test should be ignored until after the war, and it will be a long time before it is available to more than a very small percentage of the profession. It is also suggested that vaginal smears be used for diagnosis and the determination of the adequacy of treatment. These also may be ignored for the duration. Any woman of menopausal age who consults a physician about her symptoms should have treatment. This may need to be only counsel and advice, or it may need to be the administration of some estrogenic preparation. The doctor can usually decide rather quickly which form of treatment is needed.

A large number of estrogenic preparations are available such as Theelin, Amniotin, Di-ovocylin, Progynon, etc. Most of them are marketed in oily solutions containing a certain number of international units per cubic centimeter. Others state the weight of the active substance per cc. My preference is to give 2000 units or 0.1 mg. two or three times a week for two or three weeks. If the symptoms are not controlled by these small doses, the amount may be gradually increased. Until quite recently most writers on this subject stressed the need of large doses — 5000 units upward — twice a week or more often. There are two serious objections to large doses. First, they are expensive. Second, many women not only are not helped but are made worse by large doses but can be relieved by small doses. Consequently if one begins with large doses he does not help the women whose symptoms could be controlled by the small doses.

A recent improvement in estrogenic preparations is an aqueous suspension of the crystals.

This seems to be more slowly absorbed than the oily solution with the result that the effect of one injection lasts longer and the patient needs to visit the office less frequently.

A considerable number of estrogens for oral administration are available, such as Theelol, Emmenin, Progynon-DH. One of the latest additions is Premarin. In my hands it has been quite useful. The dose is one or two tablets per day or less often.

Synthetic compounds are also available. The best known is diethylstilbestrol. It seems generally regarded as a very effective medicament. My own experience has been disappointing. Not more than 10 per cent of my patients have been helped by it. As a rule, rather small doses, such as 0.2 mg., once or twice a day, are more effective than larger doses.

Treatment of the menopause should be continued with such doses and at such intervals as are necessary to control the symptoms. Usually after the symptoms are brought under control, the frequency of treatments can be decreased and eventually entirely stopped.

X-ray irradiation of the pituitary and adrenal region or the pituitary and the ovarian region with very small doses (50 r)will sometimes control troublesome symptoms that do not yield readily to other medication. These treatments should seldom be repeated at intervals of less than a month. The pituitary and adrenals may be irradiated one month and the pituitary and ovaries the next. Treatments should not be given during or within the week prior to an expected period.

*Common Errors.* Failure to consider the patient as an entity instead of centering our attention on some one phase of his complaints or activities. Some years ago it was shown that amenorrhea occured in the absence of estrogen in the blood or urine and also when there was present normal or supernormal amounts. Better results were obtained when the patient was considered as an individual and obesity, undernutrition, vitamin deficiencies and other defects corrected. Taking care of these was often followed by normal menstrual function.

Failure to recognize endocrine disorders occurring coincident with other abnormalities. For example, a very obese woman referred to me by the late Dr. Philip H. Kreuscher complained of back ache which two competent orthopedic surgeons were said to have recognized as due to a displaced intervertebral disc and had advised immediate operation. Correction of the pituitary and thyroid deficiency responsible for the obesity with loss of some thirty pounds in weight was accompanied by complete relief of the back ache.

It is commonly assumed that the BMR measures the level of thyroid function, a plus reading indicating hyper- and a minus one hypothyroidism. This is only partly true. This test is only one bit of evidence in the case and must agree with or corroborate the other data. Hypopituitarism and hypoadrenia are associated with rates as low as those found in hypothyroidism. The three conditions may be partially differentiated by the history, physical findings and therapeutic tests. The reaction of hypothyroidism and hypoadrenia to temperature has already been mentioned. Unless the symptoms and physical findings of hypothyroidism are present, the low BMR is usually due to something other than lowered thyroid function. The administration of one grain of thyroid per day will usually aggravate rather quickly the symptoms of hypoadrenia. The administration of 0.5 cc. anterior pituitary extract will often relieve for several hours the symptoms of hypopituitarism.

The finding of a normal sella is thought to indicate normal pituitary function. As a matter of fact, films of the sella have almost no diagnostic value except in cases of suspected tumor.

During the war with its depletion of civilian practitioners and laboratory and hospital personnel, we should simplify as much as we safely can all diagnostic and therapeutic procedures. The preceding remarks are intended only to offer a few suggestions along that line.

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SUMMARY

Most physicians entering the military service from an active medical practice are likely to experience adjustment difficulties, both personal and clinical. If, however, a man can gain a perspective, early in his military life, of the specific functions of the medical under which he works, his adjustment will be greatly facilitated. If he continues to be a scientific worker and a student as well as a soldier and can accept the Army rules and regulations with a willingness to "play the game" he will likely make a successful medical officer.—*Bulletin of the Menninger Clinic, July,* 7: 136, 1943.

# WHICH PEPTIC ULCERS SHOULD BE OPERATED UPON?

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The controversary as to whether peptic ulcer is a medical or surgical problem is fortunately ebbing. The furious arguments that raged between the proponents of the purely medical treatment (Sippy, et al) and the advocates of surgery for all ulcers (Deaver, Moynihan, Mayo) have now ceased since the status of peptic ulcer therapy has become clarified in the minds of the up-to-date clinicians and surgeons. Today it is almost unanimously agreed that the peptic ulcer patient is essentially a medical problem. Furthermore, regardless of what one may believe to be the cause of peptic ulcer, it is fairly well agreed that the acid factor is most important in the chronicity of the lesion once it is established. The peptic ulcer patient, therefore, is primarily a medical case in whom the acid factor and its causes must be controlled by all available means. The surgeon often may have to be consulted during the life of a peptic ulcer patient to aid in complications that may arise. Even then, surgery does not change the peptic ulcer patient into a surgical problem; it only serves as an additional therapeutic procedure in the medical management of the particular case. In spite of clearly recognizing the importance of the acid factor, the greatest advance in the treatment of peptic ulcer was not in the field of local therapeusis — i.e. in the preparation of substances which neutralize or absorb more acid — but in the recognition that the peptic ulcer patient must be treated as an individual. This recognition has led to better understanding of the problem and to the dispelling of the idea that a peptic ulcer patient can be cured by resecting his ulcer.

Today it is generally realized that in planning the management of a peptic ulcer, a new "life" must be planned for the patient. The peptic ulcer patient must be advised not only as to his diet and medication, but also as to his habits in regard to smoking,drinking, working, and resting. He must be advised as to certain sociologic adjustments whether it is in regard to his family — wife, children, parents — or to his employers or coworkers. Not infrequently a complete change in environment is necessary for the effective control of the ulcer.

Since the ulcer patient — particularly the duodenal ulcer case — is a hyperkinetic type of an individual, which characteristic is mirrored in the behavior of his stomach, it is obvious that in planning his diet and his medication, thought must be given to the following. The diet, divided into 6 to 8 feedings at first, must be bland, nutritious, easily digestible, not too bulky, and the foods of a character which permits them to leave the stomach promptly. It should contain a high amount of vitamins and minerals. The foods should not cause too much acid secretion and at the same time should possess the quality of combining the largest amount of free acid. The currently used ulcer diets, as a rule, conform fairly well to the above demands. The medications used should complement the dietary therapy by neutralizing or absorbing excess acid following the meal and in the interval between meals (alkali, carbonates, phosphates, trisilicates, alumina gels, mucins, etc), by preventing hypersecretion (atropin and atropin-like substances), and by sedating the patient (bromides or barbiturates).

By keeping in mind the above facts it is again logical to assume that simply performing an operation on a patient with a peptic ulcer will not do away with all of the above factors. The patient cannot be told to go ahead and live as he pleases, as unfortunately has been done so often. The patients who were given such advice can now be found by the scores in the offices of every busy practitioner. Indirectly, they are the ones who have brought the profession to the realization that there is no short cut to ulcer treatment.

Without being too dogmatic, we believe that there are definite indications for surgery in patients with peptic ulcer. These indications can be divided into those of an emergency nature and those of an elective nature. The cases falling into the latter group can be subdivided into those

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in whom surgical intervention should be done without delay and into those who should first be tried on a strict medical regimen.

### Acute Surgical Emergencies

*Perforated Peptic Ulcers* There is no controversy about perforated ulcer requiring immediate surgical intervention. Furthermore, it is unanimously agreed that the sooner the perforation is closed, the better are the patient's chances of recovery. From our experience at the Cook County Hospital and from reports in the literature,[1] it is clear that the mortality rises almost directly as the square of the length of time it takes before the perforation is closed (mortality varing form 8 per cent when the perforation is closed within twelve hours to 30 to 50 per cent after twenty-four hours). A perforated ulcer therefore requires immediate surgery for a low mortality.

The diagnosis of ruptured ulcer is not difficult. At the Cook County Hospital, the junior intern practically always diagnoses these cases. He bases his diagnosis on the classical picture, including acute onset of intense pain and rigidity which are associated with such a bout of distress that the patient is usually in shock at the time of admission. At the beginning, the pain is almost always epigastric, only later may it shift to the right lower quadrant. The patient usually has a previous history of ulcer distress which recently has not been relieved by frequent feedings, medication, and aspiration. On examination, the abdomen is rigid; there may be elevation of temperature and a leukocytosis. The x-ray is of inestimable value in providing the diagnosis by demonstrating free air under the diaphragm. The absence of free air from the peritoneal cavity, however, does not speak against the perforation if all other symptoms are characteristic. It is important to diagnose as specifically as possible the nature of an acute abdomen, since a higher mortality occurs in cases operated without a definite diagnosis. The type of incision, the method of approach, and the choice of anesthetic may depend on the location of the pathology.

All of these patients require adequate surgical preparation. The stomach should be aspirated so there will be no more spill into the peritoneal cavity. Adequate doses of morphine should be given. Intravenous fluids should be started and if shock is present adequate amounts of plasma should be given.

The anesthetic of choice is spinal anesthesia. Undoubtedly, the mortality can be lessened perceptibly by its use. If not available, then local anesthesia properly given with relatively higher doses of morphine and scopolamine, may be used although it is not nearly as satisfactory. The dangers of inhalation anesthesia are increased if a Levine tube has not been used beforehand as these patients are very likely to retch and vomit.

It might just be stated briefly that the surgery performed should be minimal; namely, simple closure of the ulcer perforation. In case of a gastric ulcer, a biopsy of the ulcer is imperative as it may reveal a malignancy. Only in exceptional cases where the closure would lead to a marked stenosis and where the patient's physical condition permits, should the surgeon attempt a gastroenterostomy to relieve the obstruction. If the patient is in very serious condition and the operation is to be as brief as possible, a jejunostomy may be done; the more radical surgery being deferred for a later date.

The operative technic is of great importance. The use of a purse string does not prove satisfactory in most cases. Most perforations occur in chronic ulcers with a poor blood supply due to endarteritis and endophlebitis. Cutting into the ulcer produces very little bleeding. If a purse string is used, the sutures may tear out making a very insecure closure. Routine excision of ulcers is not necessary. The simplest technic is a through-and through closure with non-absorable suture material. Catgut is not recommended because of the amount of fluid present which makes tight closure difficult because of softening of the gut. The finest silk is advised. If there is a relatively large, callous ulcer, an omental tag or a piece of rectus muscle may be used to tie over, in order to give some leeway for tension. In closing a perforation, the best method is a simple closure bringing the sutures tight enough to close but not to strangulate the tissue.

Drainage is not recommended. If it is impossible for the surgeon to overcome the habit of using drains, the latter should be inserted in a location that does not approach the site of pathology. Some authors recommend suprapubic drainage because of possible accumulation of fluid in the pelvis. The only good reason to drain there would be to lessen the possibility of a cul-de-sac abscess, but that is an uncommon complication. In suprapubic drainage, there is the

danger that the drain may become plastered against a loop of small bowel causing obstruction. The surgery of intestinal obstruction is much more dangerous than drainage of a cul-de-sac abscess.

A most important factor in the postoperative care is the use of a Levine tube. It should be inserted at the time of admission and should remain for two or three days after surgery. It prevents gaseous distension and postoperative gastric dilatation. If distension were allowed to occur, another perforation might result. Adequate fluids and blood transfusions are in order.

A *massive hemorrhage* is another indication for immediate surgery.[2] Such an ulcer is usually found in elderly patients in whom the bleeding vessel is sclerotic and embedded in connective or granulation tissue, both of which are factors preventing the spontaneous cessation of the bleeding. It is not uncommon to see at operation such a vessel spurt blood with each systole. Obviously conservative treatment in such a patient will result in failure, the patient dying of exsanguination.

Patients under 40 rarely die from massive hemorrhage. They present an entirely different problem and may be handled from a medical standpoint unless they have had several bouts of bleeding during a 24 hour period. Repeated bouts of hemorrhage within a few days or a week suggest surgery even in younger patients. In these latter, however, if the patient gets along all right, it is better to operate during a quiescent period.

The older individuals with sudden hemorrhage are a different problem. In them, operation must not be delayed too long. Patients who bleed slowly but continuously and who are carried along for a week or ten days on blood transfusions present a greater surgical risk.

We believe that whenever a patient over forty years of age continues to emese large amounts of blood and to pass persistently liquid, red, tarry stools, and to show a rapid pulse, falling arterial pressure in spite of blood transfusions, he should be given the benefit of surgery. By continuing the administration of blood during the operation and after the operation, giving 1000 to 2000 cc. or more, it is possible to save such patients. Spinal or local anesthesia is preferable. It is important to keep the blood pressure low until the site of bleeding is reached. All of these patients should receive blood or plasma while on the table.

The majority have an ulcer which penetrates into the head of the pancreas eroding the pancreatico-duodenal artery. The preferred technic is a high gastric resection with removal of the ulcer. Frequently an erosion of the pancreatic vessel can be demonstrated at surgery. At the Cook County Hospital with all the blood we need, with spinal anesthesia, and with rapid exposure and control of bleeding, we have resected these patients with a relatively low mortality.

*Pyloric obstruction*: This complication of a duodenal or gastric ulcer requires surgical intervention only when it has been proved that the obstruction is on a cicatricial basis. Elderly individuals with duodenal stenosis are frequently diagnosed as possible carcinoma cases. The healing of an ulcer in an older individual frequently produces obstruction. In many instances, quite marked obstruction with retention may be present, due to pylorospasm and edema. The latter recedes on careful medical regimen. Patients with pyloric obstuction should be carefully decompressed by Levine suction and the use of antacids, antispasmodics, and sedatives. If, at the end of 10 to 14 days, not much change in the obstruction is noted, the patient is a candidate for surgery. In these patients the blood chemistry has to be watched closely during the observation period as they tend to develop alkalosis. These patients are not emergencies, but should be carefully prepared for surgery by the use of blood, plasma, glucose, or Hartman's solution and by decompression of the stomach. If operated while the stomach is dilated, there will be a relatively high operative mortality. The type of operation performed depends on the amount of free acid found and on the age of the patient.

Most of them can be operated under a local anesthetic. The operation performed usually is a gastroenterostomy. The Levine tube is kept in for several days before and several days after surgery.

There are several points to be remembered in the technic of gastroenterostomy — points which are seldom mentioned in the literature. In spite of adequate preoperative preparation, there will still be some dilatation. When a gastroenterostomy is to be performed on a dilated stomach, a fairly long proximal loop should be left since

there will be some shrinkage of the stomach pulling the anastomosis into the lesser peritoneal cavity. Another point is the avoidance of obstruction from the second row of stitches. When doing the anastomosis, one must be sure that the lumen is not blocked. We prefer to do without clamps if we have a small bowel. Practically all cases that are supposed to have obstruction from a hypoproteinemia actually are obstructions due to operative technique. In an anastomosis one must be sure that the distal loop is open so there is no intestinal obstruction.

*Large gastric ulcers*: A large gastric ulcer is another form of ulceration requiring surgery. From a follow-up of patients with large gastric ulcers during the past ten years at the Cook County Hospital Gastrointestinal Clinic, data have been obtained which strongly support the contentions of Walters, et al,[3] that such lesions are best resected when intially seen. The study[4] showed that there is little to gain and much to lose in regard to (a) loss of time from recurrences, (b) danger from severe hemorrhage, (d) perforation, (e) penetrations, and (f) possible malignant degeneration, form a conservative attitude in such ulcers. Not only is the conservative treatment of such lesions unsatisfactory, but there is also the constant danger of mis-diagnosing such a large lesion as benign when it is actually malignant since the differential diagnosis is very difficult in the presence of huge craters.

### Cases To Be Retried On A Medical Regimen Before Surgical Intervention

In this group belong the pyloric obstructions and the ulcer patients with intractable pain. The patients having pyloric obstruction have been discussed above. To recapitulate, if after a careful regimen as outlined above, the stenosis persists it is usually on a cicatricial basis and operation is indicated. If, however, the stenosis is on an inflammatory, spastic, or edematous basis, the above treatment will result in a decrease of the edema and the gastric emptying time may return to normal. Such patients should then be placed on a rigid medical regimen. Most of them will continue to do well. Some will have recurrences of the pyloric obstruction. In the latter surgery may ultimately have to be done.

*Intractable Ulcer:* A type of ulcer patient who frequently needs surgical intervention is the one with so-called intractable ulcer pain. These patients are usually high strung individuals who may or may not carry out the medical management thoroughly. Usually, they do follow orders since they have excruciating pain day and night. At times, rest, aspiration, and other items in a medical regime do not give relief. Usually they have marked hyperacidity and on x-ray examination hypermotility of the stomach is noted. They are usually in the younger age group. Some of them must be treated medically, psychiatrically, and by radical surgery.

As a rule such patients should be observed for a fairly long time on a rigid medical regimen before surgery is advised as otherwise the results are not satisfactory.

Before closing, we believe it advisable to briefly discuss the problem facing the surgeon doing gastric surgery. If medical management is based on the control of the acid factor, then surgical treatment must accomplish the same result. This is the only principle to which we may hold. We have gone through many different phases in the surgery of these cases: pyloroplasty, gastroenterostomy, gastroduodenostomy, occlusion operation, etc., but all have fallen into disuse. Either radical surgery or medical management is advocated. The rank and file of men doing indirect surgical procedures have a higher mortality than the experienced surgeon doing radical procedures. The patient should not be subjected to surgery unless the surgeon is prepared to give him a chance to recover by controlling the acid factor, i. e. by a high gastric resection. Early advocates of radical surgery suffered a good deal of criticism, but now, after twenty-five years, their opinions are borne out.

There are several factors in surgical management to keep in mind. First, how low a mortality is it possible to have with high gastric resection? One must have a relatively low mortality in order to suggest a radical operation to a patient. Should everyone be doing gastric surgery or only a limited group of surgeons? It probably should be a limited group since mortality is always high unless one is frequently doing gastric surgery. Lahey[6] reported an 18 per cent mortality in his first hundred case, but today his clinic may report a hundred cases with no deaths or possibly only one death. The reason is that only a few men are doing the gastric surgery at his clinic.

This is true of any group of cases. If any hospital is to have a low mortality on a given type of case, the cases must be cared for by a selected group of men who will really take an interest in the problem, not only in the surgical technic but also in the pre-and postoperative care.

## Summary And Conclusions

1. The management of peptic ulcer should rest with the clinician.

2. The surgeon, however, is called upon in a certain number of cases to aid in the management of the ulcer problem. In most instances the surgeon is called upon to deal with the complications of peptic ulcer and those of an intractable nature.

3. The principles which govern the medical management (particularly the acid factor) must be kept in mind and surgical procedures carried out which control the acid factor.

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## DISCUSSION

Dr. Alfred A. Strauss, Chicago: — Mr. Chairman, I can add very little to what Dr. Karl Meyer has said regarding "*Which* Peptic Ulcers Should Be Operated Upon." We both have had about the same experience so our ideas regarding the indications for operation are similar. I can very heartily agree to all of his statements. All that I can add would be to emphasize a few statements that he has made. For instance, he spoke about the indications for operation. I agree with him that a duodenal ulcer is definitely medical until the patient has complications. The most important complication that a patient has from chronic duodenal ulcer is obstruction due to contraction of the duodenum, symptoms that are not relieved by medical treatment. There is no more reason for treating a patient for 15 or 20 years for a duodenal which has incapacitated him to the extent that he could not make a living for his family, than you would treat him medically for gall stones all these years.

The reason that medical men and surgeons have hesitated to do sub-total gastrectomies on duodenal ulcers all these years as readily as on gall bladders and gall stones was on account of the mortality rate. At present there are many surgeons in this country and abroad that are doing sub-total gastrectomies for duodenal ulcer with a mortality of 1½% to 4%. This is about the same mortality that occurs with gall bladder operations. Therefore, the patient who has ulcer symptoms for many years without relief should be operated as readily as the patient with gall stones.

It is interesting to note that patients along in years endure gastric resections very well — and almost as well as younger individuals. In the last twenty-five years we have performed sub-total gastrectomies for duodenal ulcer on 1150 cases with a mortality of 3.2%. Ten per cent were between the ages of 70 and 80 and had very little more mortality than younger people, which illustrates that older people are as good surgical risks for gastric resection as for other major surgical procedures.

Regarding the statement he made about bleeding ulcer: I fully agree with Dr. Meyer but I would like to emphasize one point. There are three locations in the stomach and duodenum where massive hemorrhage occurs and then operation should be performed as quickly as the patient can be gotten ready with blood transfusions. Namely: 1. Those indurated ulcers of the lesser curvature of the stomach. (The bleeding is usually from a large blood vessel of the lesser curvature.) 2. Hemorrhage from known chronic indurated posterior wall duodenal ulcers. (The hemorrhage is usually from a pumping vessel, a branch from the pancreatic-duodenal artery.) 3. Massive hemorrhage from a gastrojejunal ulcer in which the hemorrhage usually comes from the mesenteric side (mesenteric blood vessel) of the jejunum. In many of these cases the patient is held too long by the internist before transferring him to surgery. If the patient's condition is critical we prefer to go in under local anesthesia and simply stop the hemorrhage by ligation or local excision of the ulcer and then later do a sub-total gastric resection. We prefer local excision of the ulcers, especially in those that have been held by the Medical Department for a week or so with the repeated transfusions, and the patient is still critical.

Those cases of bleeding ulcer that are in fair condition after transfusion, we believe, should have immediate sub-total gastrectomy. As to gastric ulcers, I have an entirely different feeling. I believe that all

gastric ulcers should be removed by sub-total gastrectomy and never treated medically because there are no means at present to differentiate which lesion is a gastric ulcer, or a primary carcinoma of the stomach, and until we have a serological test for carcinoma, as we have in the Wasserman Test for syphilis, these cases should be treated surgically. In addition, if you compare the end results and mortality rate for gastric ulcer over a long period of years by medical treatment, as compared with sub-total gastrectomy, you will find surgery will show by far the best result.

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## GENERALIZED LYMPHOSARCOMATOSIS WITH MARKED INVOLVEMENT OF THE BRAIN

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AND

M. E. Uznanski, M.D.

CHICAGO

The following case (of Dr. M. E. U.) is reported because of the unusual cerebral and meningeal involvement and the fulminating clinical course of the disease.

*History*: The patient, a girl, aged 13, entered St. Mary of Nazareth Hospital February 3, 1942, complaining of headache, stiffness of the neck, and great general weakness growing progressively worse for one week prior to admission. In the last three days the patient developed marked dyspnea accompanied by nausea and vomiting. She has also noted a heavy pain in the lower abdomen and pain in the right side of the chest accompanied by a dry cough. Within the last two days there have occurred blurring of vision and occasional diplopia. The patient had considerable difficulty in chewing and swallowing.

The past medical and surgical history was essentially negative. Catamenia began in June 1941, every 28 days normal in amount and without pain. Parents and three siblings were living and well and the family history was negative for tuberculosis, malignancy or diabetes.

Examination revealed a moderately well developed and nourished white adolescent girl, rather pale, and appearing ill, but answering questions well and generally cooperative. There was a slight horizontal nystagmus. Pupils were equal, regular and reacted sluggishly to light and accommodation. There was a definite weakness of muscles of expression, more marked on the right with deviation of the mouth to the left on exposing the teeth. The ophthalmoscope revealed blurring of the margins of the right optic disc. The tongue was dry with a white coating, was protruded with effort, but in the midline. Pharygeal reflex was absent. There was stiffness and pain on flexion of the head and the Brudzinski sign was positive.

The left breast was that of a normal adolescent; the right was about twice as large as the left, hard and somewhat tender. The axillary glands on the right side were palpable and tender. There was dulness on percussion of the right lower chest and crepitant rales were heard at the base posteriorly. The heart sounds were normal.

The abdomen was diffusely tender and distended. There was a palpable mass about the size of an orange, firm and ballotable in the midpelvic region. The genitalia were adolescent. Rectal examination revealed that the abdominal mass was above and separate from the uterus.

The extremities showed weakness of the flexor muscles of both arms. The deep reflexes were depressed and the right knee and Achilles jerks were absent. Superficial reflexes were negative.

Laboratory examination was as follows: Red blood corpuscles 4,300,000, white cells 12,800, hemoglobin 77.9 per cent. Differential: Neutrophiles 83 per cent, lymphocytes 15 per cent, monocytes 2 per cent. Repeated blood counts showed essentially similar results. The blood serology was negative.

The spinal fluid was under pressure, cloudy and contained 2,144 cells per mm. with lymphocytes 98 per cent, neutrophiles 2 per cent. There was an occasional endothelial cell. Globulin test was strongly positive, and blood chlorides 396 mgm. The spinal Wassermann was negative and smears showed no organisms. The blood culture was also negative. The temperature varied from 98.2 to 101.8 and before death reached 105. The pulse varied from 60 to 150 and was erratic. On the twelfth of February the patient developed a series of convulsions and died on February 13. The autopsy was performed within an hour after death.

*Autopsy Findings*—The autopsy was performed on February 13, 1942, by Dr. Hill at St. Mary of Nazareth Hospital.

The body was that of a moderately well developed somewhat emaciated white female, 13 years old. Superficial lymph nodes were not palpable. The right breast was enlarged and contained a firm mass 8 x 6 x 4 cm., circumscribed but not encapsulated. The cut surface was smooth, grayish white and translucent.

The thorax was opened by the supraclavicular and midline incision and the breast plate was removed. The lungs were free and the pleural surfaces smooth. There was crepitation throughout. The cut surface appeared congested especially in the lower parts with small irregular patches, darker and firmer than the surrounding lung tissue. The heart was normal in size, form and position. There was a small amount of clear fluid in the pericardiac sac; epicardium was smooth; myocardium firm and pale; ventricular walls of normal thickness. In the posterior wall of the right auricle there was an area 3 cm. in diameter, thickened to about 1 cm., with a smooth grayish cut surface. The valve leaflets and the great vessels were essentially normal.

The stomach was of normal size and shape. Serosa was smooth. There was a diffuse and uniform thick-

ening of the wall to 1 cm., throughout the entire organ. The cut surface was smooth, white and translucent. The mucosa was flattened, congested and presented an irregular ulcer 2 x 3 cm., on the anterior surface of the fundus. The small and large intestines were essentially normal. The liver was of normal size and shape, and dark purplish-red. Its margins were somewhat rounded. The cut surface was markedly congested. The gall bladder was of normal size, serosa was smooth; the wall of the fundus thickened from 3 to 8 mm. The cut surface was smooth, white, and translucent. The mucosa was velvety with its lumen filled with thick dark bile.

The spleen was normal in size, shape, and was firm.

The uterus was normal. The right ovary was enlarged to a diameter of 10 x 15 cm. The external surface was smooth with grayish white hemorrhagic areas. The cut surface was firm, white, and translucent with occasional small cyst. The left ovary was similar to the right except that it was only about one-fourth as large as the right. The fallopian tubes were normal.

The retroperitoneal tissues especially on the right side were thickened and firm, white, homogenous, and translucent in section. No separate lymph glands grossly were visible in the thick retroperitoneal mass. The right kidney was enlarged and embedded in this white peritoneal tissue. The capsule stripped readily leaving a somewhat mottled grayish tissue with many areas of hemorrhage extending into the substance of the kidney in several places. The ureter passed through the white tissue in its entire length and had apparently been compressed by it. The pelvis was distended. The left kidney was similar but the amount of white tissue was much less. The pelvis, however, was doubled. The urinary bladder was essentially normal.

The scalp was opened by the usual transverse incision and the skull removed. The dura was tense and its opening released an increased amount of turbid cerebro-spinal fluid. The blood vessels of the pia and arachnoid were engorged. The subarachnoid space contained much turbid fluid. No definite tubercles or tumor masses were seen in the meninges though the arachnoid appeared somewhat opaque in places. The bones of the skull and membranes covering them appeared normal.

*Anatomic Diagnosis*: 1) Generalized lymphosarcomatosis 2) Tumor leptomeningoencephalitis.

*Microscopic sections* revealed lymphosarcoma involving both ovaries, retroperitoneal cavity, kidneys, heart, stomach, gall bladder, meninges and brain. The process in the brain and meninges involved chiefly the perivascular and adventitial spaces in the form of densely packed cuffs of lymphoid cells. In the smaller blood vessels only the endothelial lining separated the tumor cells from the lumen of the vessels. The intima appeared to be an effective barrier against the overflow of the tumor cells into the circulatory stream.

## DISCUSSION

In surveying the literature on lymphosarcomatosis and allied conditions, there is found a great confusion both in classification and terminology. A number of schools of thought exist on the subject of lymphoblastic formations, their relationship to each other, to such apparently widely divergent disorders as leukemia and "true" tumor formation. Equally little is known about etiology and mode of dissemination. A study of various classifications (C. J. Watson,[1] Ewing,[2] Minot and Isaacs,[3] etc.) suggests one rather sharply distinctive clinical tendency; namely, that some of these disorders tend to produce a dramatic change in the white constituents of the blood (leukemia) while others tend not to alter them. Of the conditions producing no characteristic blood changes, two stand out clearly; namely, Hodgkin's disease (lymphogranuloma) and lymphosarcoma. And just as there is much difference of opinion whether lymphogranuloma is a tumor formation or an inflammatory disease, so in the case of lymphosarcoma it is uncertain whether it should be classified as a true tumor formation or a systemic disease together with leukemias. Some authors (Naegeli[1]) would place lymphosarcoma in an intermediate position between leukemias and tumors, as partaking of the characteristics of both. Sternberg[4] further differentiates lymphosarcoma from lymphosarcomatosis, the latter differing from the former in being both a regional and a systemic disease. Borst thought that the spread of lymphosarcomatosis is not metastic but occurs locally and simultaneously in many places as an outgrowth of the vascular endothelium. E. Lenz[4] stated that the primordial tissue for lymphocytes, *"the undifferentiated pluripotential mesenchyme,"* is found, among other places, in the adventitia of the blood vessels.

Histologically, three types of cells are found in lymphosarcomatosis[6] (1) large reticular cells (2) intermediate types (3) small lymphocytes. It is possible that these three types are but transitional stages in the evolution of the tumor cells.

The case here described falls in the group of lymphosarcomatosis with small lymphocytes as the cell type. The unusual features of the case are (1) extremely rapid evolution of the process,

total clinical duration of the process being about eighteen days. In 18 cases out of 5000 consecutive autopsies reported by Ehrlich and Gerber,[6] the reticular type was the most chronic (21.5 months); the intermediate type averaged 8.6 months, while in the small lymphocyte type the average duration was 2.0 months. Other statistics speak of great chronicity of lymphosarcoma. Thus, A. U. Desjardins[7] in a series of 55 cases found the average duration to be 28 months. Irradiation, while temporarily alleviating the symptoms, affects but slightly the duration of the disease.[8]

The second interesting feature in this case is the marked difference in involvement between the right and left sides of the body, as evidenced by the much greater size of the right ovary, the right kidney and the right retroperitoneal tissues. Such a distribution would favor the probability that the spread was by extension along the blood vessels analogous to a prairie fire rather than by metastases. Simultaneous autochthonous development of tumor cells along the course of the vascular tree is of course not excluded.[6]

The third feature is the marked and early central nervous system involvement which produced such urgent meningeal and brain symptoms as to mask utterly manifestations in other organs. In the 18 cases reported by Ehrlich and Gerber only two presented involvement of the meninges, ependyma of the lateral ventricles, central canal of the spinal cord and cronial nerves. No metastases, however, were found in the brain substance or the spinal cord.

It should be remarked, in conclusion, that such an ubiquitous invasion of blood vessels by the tumor cells, even down to the endothelial lining as this case presented, without any evidence of leukemia speaks against identity of a case of this type with leukemias. Apparently, in order for leukemia to occur, there must be not only excessive formation of lymphocytes but an opportunity and ability of these cells to be released into the blood stream, either by ameboid movements or altered permeability of the vascular endothelium.

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## DUTIES OF THE PATHOLOGIST IN THE UNITED STATES PUBLIC HEALTH SERVICE

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Before considering the actual duties of the pathologist in the USPHS it would, perhaps, be of interest to give a general survey of the activities of the Service, noting particularly those phases which would be of special interest to pathologists.

The USPHS is the principal federal agency concerned with research in the diseases of man and the promotion of national health. At the present time, the personnel of the Service totals approximately 17,000, including some 1600 commissioned officers. The commissioned corps, which administers the affairs of the Service, and carries out many of its functions directly, is composed of uniformed officers who are appointed and commissioned by the President. It is organized like the medical corps of the Army and the Navy.

Since its organization in 1798, various duties have been assigned to it, in peace and in war time, so that today its functions are diverse and wide-spread. War time duties for the most part, consist of an expansion of its pre-existing peace time facilities, as well as such tasks as arise with current needs. Thus, the medical care of the Coast Guard, both in the shore stations and at sea, which in peace time is but a small part of its many functions, becomes increasingly significant with the expansion of this branch of the armed forces. As another example, the civilian aspects of the venereal disease program become overshadowed in war time by the greater problems of venereal disease control in military extracantonment and war industrial areas. On the other hand, an assignment such as duty with the U. S. Army in the Pacific combat area or the appoint-

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ment of a USPHS officer to a typhus control commission in North Africa are examples of war time duties.

The organization, reorganized Nov. 11, 1943, under Public Law 184, 78th Congress, consists of several Divisions, but I shall enumerate only those to which a pathologist might be assigned or those activities to which his interest might be directed.

*Division of States Relations* is concerned with the Federal-State cooperative health program and with prevention of inter-State spread of communicable diseases, particularly tuberculosis, malaria, plague, typhus, and gastrointestinal infections. The Public Health Service Plague Laboratory in San Francisco conducts collection and bacteriologic examinations of animals and human tissues for the identification of the Pest bacillus.

*The Division of Foreign and Insular Quarantine and Immigration* takes measures to prevent the introduction of quarantinable diseases into this country. Increased airplane service to the United States requires increased vigilance particularly in regards to insect vectors.

*The Division of Mental Hygiene* is interested in the physiology, pathology and therapy of drug addiction, with the hospital at Lexington, Ky., furnishing clinical material.

*The Division of Venereal Diseases* is of the utmost importance to the war health program, and of special interest to the clinical pathologist. At the Venereal Disease Research Laboratory at Stapleton, N. Y., facilities are on hand to study the clinical and experimental effects of new drugs, evaluation and standardization of serologic tests, comparative studies of cultures and smears for the gonococcus, and cultural characteristics of the treponema pallidum. As part of the general program to standardize serologic methods, opportunities are given to civilian technicians to train at the laboratory.

*The National Institute of Health in Bethesda, Maryland,* is a large unit comprised of several divisions:

*Division of Biologics Control* enforces the Biologics Act. This includes investigation of methods of manufacture, potency, standardization and sterilization tests of biologic products.

*Division of Chemistry* is concerned with biochemical research.

*Division of Chemotherapy* is interested in the synthesis of new drugs, the evaluation of existing drugs, and research in nutritional science.

*Division of Industrial Hygiene* among other duties investigates the toxic reactions of substances like carbon monoxide, heavy metals, pneumoconiosis-producing dusts, explosives and other industrial hazards. Pathologists are assigned to these studies.

*Division of Infectious Diseases* carries on various projects which are of interest to a pathologist. The Rock Mountain Spotted Fever Laboratory makes field and laboratory studies of rickettsial diseases, also produces vaccines for yellow fever and Rocky Mountain spotted fever on a large scale. At Bethseda, the organisms of typhus, "Q" fever, St. Louis encephalitis, tularemia, yellow fever, and poliomyelities are investigated.

*National Cancer Institute* is engaged in experimental cancer research. Several pathologists and other specialists are detailed to the Institute. At present, the interest is focused on carcinogenic substances, heredity, the effect of diet, properties of cancerous tissues and diagnostic tests. The National Advisory Cancer Council recommends grants-in-aid to civilian cancer study groups.

*Division of Public Health Methods* studies problems of housing, environmental sanitation, stream pollution, public health administration, medical care, and health statistics.

*Division of Zoology* continues its work principally in parasitology with particular interest in trichinosis, oxyuriasis, and amebiasis, and more recently, certain exotic tropical diseases to which American troops are exposed in several war areas.

*Division of Pathology* also one of the units of the National Institute of Health, is concerned with tissue pathology and research. It examines autopsy and surgical tissues from the smaller Marine and Indian Service hospitals and Federal prisons, where a staff pathologist is not on hand. It may also serve for consultation to the regular Marine hospital pathologists. Its main project is the examination of tissues from experimental animals in conjunction with studies in other Divisions. Recent interests include poliomyelitis, choriomeningitis, Rock Mountain spotted fever,

typhus, psitticosis, and virus diseases. The pathologic changes in deficiency diseases, heavy metals, and drug toxicity are observed. The Division also serves as a training center for the younger pathologist. This completes the group at the National Institute of Health.

The pathologist is ordinarily assigned to a Marine Hospital under the Division of Marine Hospitals and Relief, where he fulfills his functions as anatomical and clinical pathologist. Except for the type of patient which is admitted to the Marine Hospital, his duties are essentially similar to that of the civilian pathologist. In war time, approximately 50% to 70% of our patients are service men, including Coast Guardsmen, soldiers, sailors and merchant seamen. The balance includes any other government employee who may be eligible for government hospitalization. As a medical officer the pathologist may be assigned certain details like any other officer. Thus he may act as a member of a Coast Guard retirement board, or may be assigned to a board of medical survey. Officer-of-the-Day is a duty which is not spared the younger pathologist. In the Chicago area where quarantine and medical immigration inspection is assigned to the Hospital Division, he will also board ships for this purpose. These duties as a whole are not too time-consuming and allow the pathologist to devote a major portion of his time to the laboratory.

Various duties arising from the pre-war time mobilization and from war time activities have required new and sudden adjustments of the laboratory service in addition to the routine hospital work. For instance, with the mass induction of Coast Guardsmen, our laboratory in Chicago was required to increase its serologic test load tenfold. With the increased activity on the venereal disease wards many more darkfield examinations are requested, more serologic tests are done and many more cultures and smears are examined for the gonococcus. Application of newer methods and doses in the treatment of syphilis require more frequent and complete serologic examinations. Certain communicable diseases increase during war time, so that more and comprehensive studies of streptococcal and pneumococcal and meningococcal organisms are required. The so-called atypical pneumonias demand more laboratory studies than the typical pneumonias in order to exclude other possibilities. The alertness for the diagnosis of infectious mononucleosis, particularly with upper respiratory infections now require an adequate blood smear and serologic examination in many more instances than might be demanded in private practice.

The numerous required immunizations to all government personnel are usually given in the laboratory. In addition to these vaccinations, clinics are held at intervals to immunize civilians going into yellow fever zones on missions related to the war effort. The blood type is also part of a health record.

Public Health Service officers have been assigned to the medical section of the Office of Civilian Defense. In conjunction with other grantee hospitals, the larger Marine hospitals have been assigned the task of establishing and maintaining plasma reserves and depots. It is noteworthy that one of the requirements for a grant is that the plasma bank be under the supervision of a competent pathologist.

The pathologist thus obtains a variety of interests in the Public Health Service. He also finds in the Service cooperative consideration for his routine work and individual efforts.

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Tuberculosis has no sporting instinct and it does not follow the Marquis of Queensbury rules for combat. Wartime with its overwork, strain, anxiety, food shortages, over-crowded living conditions, makeshift working conditions, broken rest and lack of proper recreation manages to lower the resistance of many otherwise strong people. That is when tuberculosis strikes. Persons between the ages of 15 and 45, the age range when the disease most often comes, should be warned that colds and other seemingly simple ailments should not be neglected. The disease can be easily checked if it is found in time. The easiest marks for tuberculosis are boys and girls in their late teens and early twenties. We can look forward to the time when every young person going to work for the first time will have his or her lungs X-rayed as a matter of routine. Joseph Alexander, M.D., Sea View Hospital.

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While we look for the virtual conquest of tuberculosis within the measurable future, we cannot hope for the annihilation of the tubercle bacillus. Unless Nature takes an unexpected whim to do away with it beforehand, this acid-fast rod may be present at the obsequies of the last man on earth. Therefore, it is well for tuberculosis workers to prepare for permanent duty during war and peace, in good times and bad, lest the microscopic vegetable seize the unsuspecting moment and the fertile spot to seed itself anew. J. Burns Amberson, M.D.

# Clinicopathologic Conferences

J. J. Moore, M.D., Department Editor.

## THREE CASES OF LONGEVITY WITH CARCINOMA OF THE THYROID

PRESENTED BY:
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AND
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*CASE* 1.

A well nourished female child aged 4 years had enlarged right cervical lymph nodes which clinically seemed tuberculous and were excised on June 3, 1930 by Doctor Coleman Buford at St. Luke's Hospital. Four of these lymph nodes had a maximum diameter of 3 cms. and several others were smaller. They contained firm grey tissues which histologically had acini like those of a hyperplastic goiter and a scanty supporting fibrous stroma. The diagnosis was metastatic thyroid gland carcinoma of the cervical lymph nodes. Figure 1. On June 18, 1930 Doctor Buford removed the right lobe and isthmus of the thyroid and other lymph nodes. The right lobe was 5.5 by 2.5 by 2.5 cms. and the isthmus continuous was 3 by 3.2 by 1.8 cms. Figure 2. They weighed 22.8 grams. The right lobe contained red-brown tissues mottled with grey but without the usual lobular markings and vesicle structures. The grey portions comprised about a third of the tissues, formed aggregates slightly elevated on the surfaces made by cutting and ranging to 2 cms. diameter. The tissues of the isthmus were tan-grey and had fine vesicles. Six lymph nodes were 1 to 3 cms. in maximum diameter. The grey portions in the thyroid were cancerous tissues composed of papillary and acinar units. Figure 3. The child continued to grow and develop normally without signs of any illness. She appeared at meetings of the medical staff of the hospital and her clinical history was discussed. After about two or three years roentgen films of the lungs had many small opacities and the possibility of a disseminated pulmonary tuberculosis was considered. On July 14, 1936, six years after the diagnosis of primary carcinoma of the lymph nodes had been made, then at the age of 10 years, she was admitted to the Rockford Hospital because of dyspoea, emaciation, and marked debility. Death occurred on July 15th and the postmortem examination by Doctor H. D. Palmer demonstrated recurrent carcinoma of the thyroid gland, and metastatic carcinoma of the

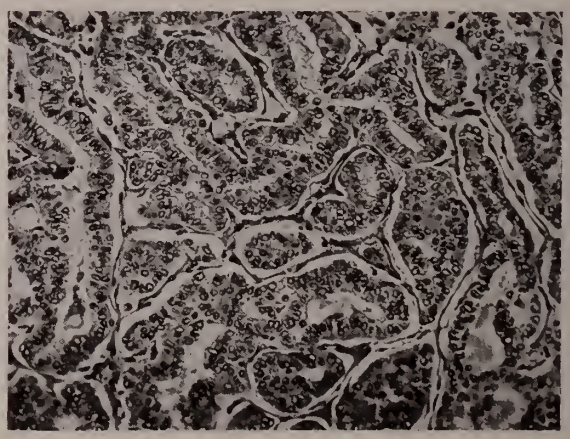


Figure 1. Photomicrograph illustrating carcinoma tissues metastatic in cervical lymph nodes and closely simulating the structure of a hyperplastic thyroid gland. Case 1.



Figure 2. Photograph of the surgically excised right lobe and isthmus of the thyroid gland. Case 1.

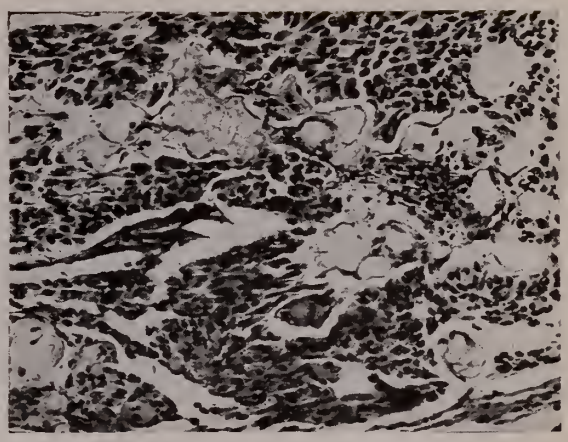


Figure 4. Photomicrograph illustrating the carcinoma tissues observed in the second biopsy material. Note the hyaline masses suggesting colloid material. Case 2.

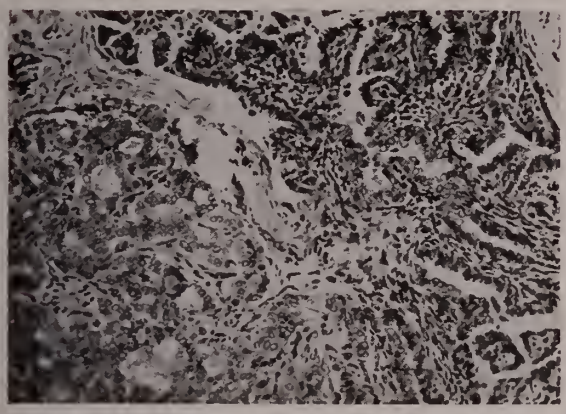


Figure 3. Photomicrograph illustrating the cancerous tissues of the thyroid gland. Case 1.

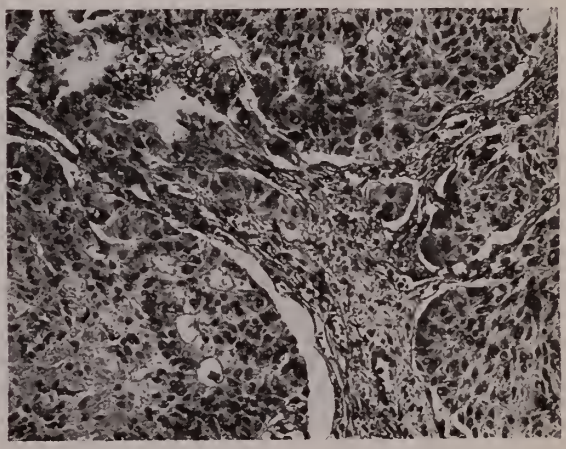


Figure 5. Photomicrograph illustrating cancerous tissues metastatic in cervical lymph nodes removed July 21, 1931. The structure suggested a primary growth in the thyroid gland. Case 3.

lungs, cervical, periaortic, and mediastinal lymph nodes. The tissue structure corresponded to that of the original tissues.

*CASE 2.*

An adult male at the age of 29 years in 1915, noted a nodule in the left side of his neck which increased in spite of roentgen therapy so that in 1916 a hard nodular mass extended from the mandible to the clavicle. The thyroid gland, especially the left lobe, was enlarged hard and nodular. An attempt to remove the mass in the neck on March 8, 1923 was unsuccessful because of its firm union with adjacent structures. Two small lymph nodes and portions of the mass were removed. For some reason, the disease was considered to be Hodgkins. In 1925 nodules appeared in the right side of the neck and on August 6, 1925 at St. Luke's Hospital Doctor Dean Lewis removed a portion of one. This was diagnosed as metastatic carcinoma of the cervical lymph nodes, primary in the thyroid. The cancerous tissues of this growth did not have acini but consisted of mosaics of cells in irregular masses and associated with odd aggregates of hyaline material, apparently deposits without characteristic distribution. Figure 4. Sections of tissues removed in March of 1932 were obtained for review and had a similiar metastatic carcinoma. The masses in the neck grew larger, the disease progressed slowly, and death occured March 7, 1932, at the Presbyterian Hos-



Figure 6. Photograph of the fibrous nodule in the thyroid gland tissues removed surgically on February 14, 1938. Case 3.

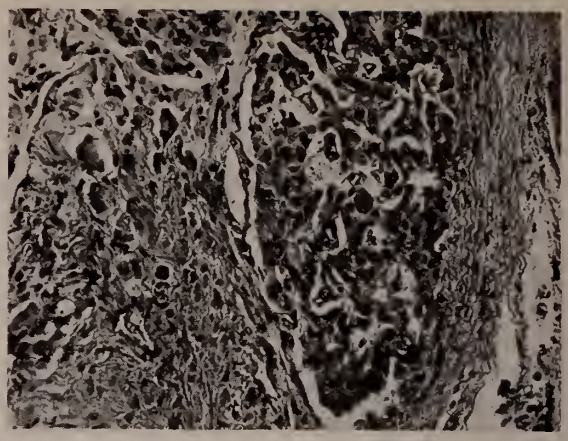


Figure 7. Photomicrograph illustrating the cancerous tissues in the fibrous nodule of the thyroid gland. Case 3.

pital. The postmortem examination by Doctor Carl W. Apfelbach demonstrated carcinoma of the thyroid gland with marked invasion of the regional structures and systemic metastases. The patient had lived with the disease about 17 years, approximately 6½ years after the second biopsy or 9 years after the first.

*CASE* 3.

A white male, aged 27 years in 1931, had a lump in his left supraclavicular fossa which appeared two years before. This was removed by Doctor R. A. Jacobson at St. Luke's Hospital on July 21, 1931. There were three lymph nodes 2.5 to 4.5 cms. in maximum diameter. These tissues had a structure similiar to those removed by the second biopsy of Case 2, and the diagnosis of metastatic carcinoma of cervical lymph nodes, primary in the thyroid gland was made. Figure 5. Nothing further was noted for 1½ years, but in 1932 or 1933 and in 1934 or 1935 several lumps appeared in the neck, one below the right ear; the others in the upper and lower portion of the left side of the neck. One of these was removed and contained tumor tissues. On February 14, 1938 Doctor Jacobson widely exposed the thyroid gland. Both lobes seemed alike, without obvious tumor, and the entire gland was removed as well as all but one of the palpable nodules. Two small pieces of thyroid gland tissue weighing 9.5 grams contained finely lobulated red-brown tissue moist with a small amount of colloid. Another mass 6 by 4 by 1.5 cms. weighed 15 grams and consisted of two approximately equal masses of thyroid tissue puckered and drawn together near the center. On one surface was a nodule 1.3 by 1.4 by 0.8 cms., and on the opposite side another 2.5 by 1.5 by 1.5 cms. When the thyroid mass was sectioned frontally, in the retracted portion was a primary fibrous mass 1 cm. in diameter, streaked with fine opaque lines. Figure 6. This nodule had a dense hyline fibrous stroma with ingrown masses, a few with small tubule structure. Figure 7. One month later (March 8, 1938) a well encapsulated nodule was removed from the right side of the neck and this also contained tumor tissues. Now all of the palable nodules in the neck had been removed. In January 1944, or about 15 years after the first lumps in the neck appeared the patient seems in good health and there is no evidence of a cancerous growth. His basal metabolic rate in January of 1937 was plus 6, and in January 1938 it was plus 10. A chronic diarrhoea disappeared immediately after the thyroid gland was removed. The only therapy given this patient was surgical extirpation of the thyroid gland and enlarged lymph nodes.

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I like work: it fascinates me. I can sit and look at it for hours. I love to keep it by me: the idea of getting rid of it nearly breaks my heart. —*Charles Jeffers' "Three Men in a Boat."*

# Industrial Health

Committee On Industrial Health — Frederick W. Slobe, Chm., 2024 South Western Ave., Chicago, Frank P. Hammond, H. A. Vonachen, R. I. Barickman, C. O. Sappington, Milton H. Kronenberg.

## SAFETY, HEALTH AND SANITATION

The following data are compiled from the Bulletin No. 13 of the United States Department of Labor, Division of Labor Standards.

*Housekeeping.*—The plant should be maintained in clean and orderly fashion.

Storage spaces should be clearly marked and posted with allowable floor loads.

Material should be piled securely.

Tools should be kept in racks built to suit their sizes and shapes.

Means should be provided for the disposal of waste and scrap.

Floors should be kept free of oil by the use of oil pans, splash guards and drip pans, by proper oiling and maintenance of machinery, and by prompt cleaning up of any spillage.

Aisles should be wide enough to permit easy flow of traffic, be clearly marked and kept free of projection hazards and debris.

Light bulbs and windows should be kept clean, walls well painted and clean.

The maintenance of cleanliness and order should be a continuous job, and not be left to occasional "clean-up" campaigns.

*Heating and Ventilation.*—During seasons when the plant must be heated, indoor temperatures should be maintained between 65° and 70° for light work, with lower temperatures, but not below 60°, for heavy work. In warm weather, controlled plant temperatures between 75° and 82° are preferable in order to avoid too great variance with outside temperatures. Relative humidity of 45-50 should be maintained unless higher humidity has been proved to be essential because of the nature of the materials or the process.

In uncrowded workrooms where the workers constitute the sole source of air contamination, air should be changed two or three times an hour. If there is less space than 400 cubic feet per worker, or if the atmosphere is subject only to nontoxic contamination, changes should be more frequent. Nontoxic air contaminants, such as excessive odors, heat, dust, smoke, etc., should be removed at their source by means of exhaust hoods.

*Lighting and Vision.*—Plants should have good general illumination, with such supplementary lighting at each machine, bench, or other place of work as is necessary to assure ease of vision. Comfort and accuracy of vision are essential to efficient and safe work performance and plant illumination should conform to the specifications of the American Recommended Practice of Industrial Lighting, American Standards Association.

Electrical lighting fixtures should be maintained in efficient working order, and windows, skylights, and other sources of natural light, should be cleaned frequently. Goggles and shields through which employees must view their work should be of a type meeting the specifications of the "American Standard" Code for the Protection of Head, Eyes, and Respiratory Organs. They should be sterilized at frequent intervals.

Good plant housekeeping, combined with the use of light paint on walls and ceilings, makes possible more efficient utilization of natural and artificial light and increases the comfort and efficiency of the worker. The use of contrasting colors on machines — medium gray for the bulk of the machine and light buff for the points of operation — eases the strain on the operators' eyes and also leads to general safety by highlighting the danger points.

*Control of Dusts, Fumes, Vapors, and Gases.*—Most occupational diseases are the result of exposure to excessive concentrations of injurious or toxic dusts, fumes, vapors, and gases released into the workroom air in manufacturing processes. Control of such hazards requires preventing injurious substances from getting into the air in sufficient amounts to cause injury. Plants using processes which produce injurious dusts, fumes, vapors, or gases should either (1) change

the process so as to substitute harmless for toxic materials or (2) catch the dusts, fumes, or gases at the point of origin and remove them to a safe point of discharge by means of local exhaust ventilation, or (3) isolate the process so as to reduce the number of employees exposed, and provide essential workers with adequate personal protective equipment. As supplementary precautions, there should be good positive general ventilation to dilute accidental escape of fumes into the air of the workrooms, and in case of dusts, frequent and thorough cleaning by vacuum or wet methods.

*Adaptation to Physical Characteristics of Workers.*—Careful attention should be given to adapting guards, machines, benches, and level of work surfaces to the height and build of the workers. This is particularly important in view of the influx of women, older men, the physically handicapped, and young persons whose stature, reach, and other physical characteristics differ, perhaps markedly, from the average able-bodied men who are being replaced. The levels of benches and machines should be lowered, or the floor surface raised by means of platforms where necessary, to compensate for differences in height. Operations of machines and processes adapted to the reach of the average male adult should be revised to permit ease of operation by new employees. Workers should be assigned to jobs involving the use or handling of heavy tools, equipment, or materials only after determination of their physical ability to perform the work. Where it is possible to lighten or split the work load, workers with less physical strength may be used.[1]

Many jobs and processes demand from the operators a high degree of both physical competence and job skill as a protection to their own safety and that of their fellow workers.[2] No worker should be assigned to such a job or process without undergoing a thorough medical examination to determine his physical fitness and no "rusty" or "green" worker should be assigned before receiving complete training in safe and efficient work practice.

*Seating Facilities.*—Alternate sitting and standing leads to greater efficiency in muscular work. Chairs should be provided on jobs where employees can work in a sitting position. This is particularly important where women are employed. Where the height of the seat requires foot rests, they should be provided and should be high enough to permit the angle of the seated employee's thighs to trunk to be less than 90 degrees. Where constant seating is not feasible but where the nature or the pace of the work permits an employee to sit periodically, chairs should be provided, one seat to three workers being advisable.

*Control of Excessive Noise.*—Excessive noise — a nerve hazard — causes loss of efficiency and should be controlled. Control can be obtained by (a) isolation — the enclosing of noisy machines and processes, (b) insulation — for example, placing vibrating machines on damping pads, (c) the use of sound-absorbing material on walls and ceilings, (d) maintenance of machines to prevent noise from loose-running or improperly adjusted equipment, and (e) maintenance of floor surfaces to minimize noise created by trucks.

### PERSONAL PROTECTIVE EQUIPMENT

*Respiratory Devices.*—Respiratory protective devices should not be considered substitutes for enclosing or exhausting processes which generate hazardous substances because, regardless of how effective or well designed, they interfere with normal freedom of breathing, are frequently hot and uncomfortable, and tend to slow production. They should be provided for employees *temporarily* exposed to dangerous quantities of dusts, fumes, gases, or vapors. All such devices should bear the approval of the U. S. Bureau of Mines.

*Eye Protection.*—Workers exposed to flying objects, splashing corrosive substances, harmful light rays, heat or glare, should be provided eye protection. This may be afforded by special shields attached to the machine, or by goggles, spectacles or face shields worn by the worker. Lenses should be in accordance with the specifications of the "American Standard" Code for the Protection of Head, Eyes, and Respiratory Organs and be chosen with a view to the specific hazard in question. They should be hardened for protection against flying objects, or be of the proper absorptive type for protection against harmful rays. Goggles should be selected to meet particular hazards and should be individually fitted to assure comfort.

*Protective Clothing.*—Employees working with chemicals or molten metals, or engaged in heavy fabrication work, or welding, etc., should be provided with appropriate protective clothing. Safety clothing (which should not be confused with "uniforms") consists of such articles as hard hats, gloves, mittens, leggings, aprons, and rubber boots. Hard-toed shoes should be made easily available. Where women are employed, protective clothing should be adapted to their needs.

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1. For information on special problems of women workers and on jobs suitable for women, consult the Women's Bureau, U. S. Department of Labor, Washington, D. C.
2. For information on the mandatory and advisory standards issued under the Fair Labor Standards Act for hazardous occupations for minors under 18, consult the Children's Bureau, U. S. Department of Labor, or the nearest field office of the Wage and Hour and Public Contracts Divisions, U. S. Department of Labor. Your State labor department can provide information on State standards for women and children.

### PERSONAL SERVICE CONVENIENCES

The following standards are minima for health and efficiency. Many industrial establishments have found that installations in excess of these standards are sound business, reducing the amount of time spent by workers in waiting their turn.

*Drinking Water.*—Workers should be adequately supplied with cool, clean, safe drinking water, taken from sources approved by local health authorities. The water temperature should be not lower than 40° nor higher than 80°. Where the process offers excessive heat exposure or the work is physically strenuous, the water temperature should be relatively high, and it may be well (under medical advice) to provide salt tablets. Ice used in cooling should not come in contact with the water. Water should be dispensed either through angle jet, sanitary drinking fountains, or by means of individual cups which are disposed of after being used once. Angle jet fountains should be constructed in accordance with the American Standards Association's specifications for drinking fountains (24.2). The common drinking cup and containers from which the water is dipped or poured should not be permitted. There should be at least one water dispenser for each 30 employees in hot or strenuous employments; for each 50 employees in other types of work.

*Toilet Facilities.*—Separate toilet facilities should be maintained for each sex. Toilets should be convenient to, but entirely separate from, workrooms. They should be well lighted and well ventilated. Floors, seats, and urinals should be of impervious materials and scrubbed daily with soap and hot water and disinfectants. There should be at least one individual urinal or 2 feet of slab urinal for every 50 male workers employed. The ratio of toilets to the number of persons of each sex should be in accordance with the following table:

| *Number of persons* | *Minimum number of facilities* |
|---|---|
| 1 to 9 | 1 |
| 10 to 24 | 2 |
| 25 to 49 | 3 |
| 50 to 100 | 5 |

Over 100—1 for each additional 30 persons.

*Washing Facilities.*—Separate washrooms should be maintained for each sex. At least one basin with hot and cold running water, or 2 feet of trough should be provided for every 10 employees up to 100; 1 extra for every 15 workers in excess of 100. Troughs should be unplugged so that all washing will be done in running spigot water. Troughs should have hot and cold water spigots to every 2 feet of length, or as a substitute, perforated pipe conveying tempered water, installed at a height of 18 to 24 inches above trough edge. When workers are exposed to skin contamination from poisonous, infectious, or irritating materials, there should be one shower with hot and cold water delivered through a mixing valve for every eight to ten workers. Mild soap, in suitable containers, and individual towels, either cloth or paper, should be provided. If general washing facilities are not convenient to toilets, at least one wash basin should be provided in, or adjacent to, each toilet room. Washrooms should always be kept in sanitary condition.

*Dressing Rooms.*—In all places of employment where it is good shop practice or necessary for employees to change from street to work clothes, separate dressing rooms equipped with lockers or other containers should be provided for each sex. Two-compartment lockers — one for street clothes, the other for work clothes — should be provided for employees whose clothes are exposed to dusts, fumes, or contamination with poisonous or irritating material. Dressing rooms for such employees should be located adjacent to shower facilities. In the absence of mechanical ventilation, lockers should be provided with perforated metal tops and bottoms, and fluted or perforated metal doors. Where, because of war shortages, it is impossible to obtain lockers, it is suggested that 18″ by 24″ wire baskets, which may be lowered and raised out of reach by a pulley cord that can be padlocked to a floor or wall ring, may provide a practical substitute. All dressing rooms should be maintained in a sanitary condition.

*Rest Rooms.*—Rest rooms separate from workrooms should be provided in all workplaces where 10 or more women are employed, with at least some screened-off facility available in places employing less than 10 women. A rest room for 10 women should have at least 60 square feet of space, with an additional 2 square feet of floor space for each additional female employee. At least one couch or bed should be provided in every place where between 10 and 100 women are employed; 2 where 100 to 250 are employed; and 1 additional couch for each 250 additional women in excess of 250.

### EATING FACILITIES

The importance of adequate eating facilities cannot be overstressed. Every effort should be made to provide them for employees on every shift. Experience shows that such facilities located on plant property make for a better type of diet than is generally possible where the workers either "eat out" or bring lunches, and are helpful in reducing accident and absentee rates. The importance of mid-shift eating facilities has increased with the unbalanced war diet which results from local food shortages and inadequate shopping time. A good hot meal at the plant often constitutes the workers' major source of nourishment Technical advice on in-plant feeding and nutrition is available through the Food

Distribution Administration. Both the Office of Price Administration and the War Production Board are cooperating with employers in making such facilities available to workers, the former through allowances of meat and other rationed items to plant commissaries, and the latter through allocations of materials and equipment for installing the necessary facilities.

Eating facilities may be provided to serve regular mid-shift meals, or simply to make available between-meal snacks. Facilities for main meals should be separate from the workrooms. Where possible, washrooms should be conveniently located so that workers can wash up prior to eating. Where a central dining room or cafeteria is impracticable and workrooms do not offer toxic exposures, the food may be brought to the workers by means of "rolling cafeterias" — combination trucks which carry hot and cold foods from a central kitchen to points throughout the plant. These trucks make possible the serving of hot and nourishing meals in a minimum of time and space. A smaller, mobile "snack" truck is useful in making available between-meal snacks of hot drinks, milk, sandwiches, and ice cream. Where lunches and snacks are served in workrooms, employees should be encouraged to wash up before lunch or snack time. No meals should be served or eaten where poisonous fumes or dusts exist.

## SAFETY SELF-APPRAISAL FORM FOR MANAGEMENT

The United States Department of Labor, Division of Labor Standards, in Special Bulletin No. 13, lists in the following concise form a check-list for management to determine its rating in the handling of safety measures.

*Management Leadership—*

1. Do we assume leadership in accident prevention by:
   - *a.* Carefully going over accident records?
   - *b.* Including safety on the agenda at management conferences?
   - *c.* Signing directives to supervisors or safety messages to workers?
   - *d.* Training foremen in safety?
   - *e.* Disciplining supervisors who fail in their safety responsibilities?
   - *f.* Employing a qualified plant safety director and giving him adequate authority?

*Accident Reporting and Analysis—*

1. Do we keep more detailed accident records than those required under workmen's compensation, including information on sources and causes? Are they used as a basis for prevention in:
   - *a.* Rule books?
   - *b.* Special inspections?
   - *c.* Safety meetings?
   - *d.* A worker-training and education program?

2. Do we compile accident frequency rates on a monthly basis? (The frequency rate is computed by multiplying the number of disabling work injuries by a million and then dividing by the number of man-hours worked by the group.)

*Elimination of Environmental Hazards—*

1. Are safety measures a part of blueprints for new buildings and processes?
2. Is all machinery and equipment properly safeguarded when purchased?
3. Is every machine guarded according to State codes, American Standards Association codes, or higher standards?
4. Are frequent checks made on illumination, temperature, humidity, and air change?
5. Are sanitary facilities and washrooms adequate and kept sanitary by a regular maintenance schedule?
6. Are aisles marked and storage facilities provided for good housekeeping, with a place for everything and everything in its place?
7. Does the safety director or committee make inspections of every shop, storage space, and operation at least monthly towards preventing all accident and fire hazards?

*First-aid Facilities.—*

1. Do workers on all shifts have conveniently located first-aid facilities and personnel?
2. Do supervisors require first-aid treatment for all injuries, no matter how slight?
3. Do first-aid personnel keep accurate records? Does the safety director or committee use these records to investigate locations or operations that are frequent sources of illness or injury?

*Safety Committees.—*

1. Have workers and supervisors been brought into the safety program through safety committees, meeting at regular intervals, with timely subjects for discussion?
2. Do foremen hold safety meetings for their workers at least monthly?
3. Are the suggestions of safety committees acted upon quickly?

*Employee Safety Education and Training.—*

1. Is instruction in safe work practice included in job training?
2. Does job induction program include:
   - *a.* Instruction on hazards of the job?
   - *b.* Instruction on the use of safety equipment and devices?
   - *c.* Safety rule books?

## AMERICAN COLLEGE OF SURGEONS SURVEY OF MEDICAL SERVICES IN INDUSTRY

The December, 1943 Bulletin of the American College of Surgeons presents a report including the list of medical services in industry approved

by the College as of that date. The following data are taken from that Bulletin:

"Approval is granted on the basis of compliance with the Minimum. Standard for Medical Service in Industry formulated by the American College of Surgeons. A Certificate of Approval is granted to an industrial establishment in which the medical organization and service are fully approved and are of such a nature as to give reasonable assurance of continued compliance with the Minimum Standard. The approval that is granted to medical services in industry does not imply, tacitly or otherwise, approval of services of employee associations, with or without employers' aid, that are designed for the treatment of nonindustrial injuries or illnesses.

"The need for better organization and service in caring for the ill and injured in industry and for the elimination or control of industrial health hazards was early recognized by the American College of Surgeons. In 1926 a Committee on Industrial Medicine and Traumatic Surgery, which consisted of representatives of the College, of medical departments of insurance carriers, and of other industrial organizations, was appointed for the purpose of studying and, if at all possible, improving this situation.

"Based upon experience and the findings of direct investigations the Committee on Industrial Medicine and Traumatic Surgery formulated a Minimum Standard for Medical Service in Industry which is applicable to all industrial organizations regardless of their size. Acceptance and maintenance of the Minimum Standard in its true spirit is entirely voluntary on the part of an industrial organization. However, since the essential features of an adequate industrial medical and surgical service are embodied in the Minimum Standard, it is readily apparent that compliance therewith will be to the advantage of both employer and employee.

"The practical application of this Standard was begun by the College in 1931 by making personal surveys of industrial medical services on a nationwide basis and the first list of approved medical services was published in 1933. To date, 1,849 different industrial establishments representing over 5,000,000 employees have been surveyed, of which number 1,101, or 59 per cent, have been fully or provisionally approved. Many of these establishments have been resurveyed one or more times.

"At the annual meeting of the Board of Regents of the American College of Surgeons held in the latter part of each year, public announcement is made of the approved medical services in industry and the list is published. It is realized that there are medical services recently organized and others that are worthy of recognition but of which time has not yet permitted a survey. Many requests for information and surveys are received by the College with which there is compliance without expense to industry. The surveys are arranged, of course, in as orderly a procedure as possible to include a large group of industrial organizations in a region, state or province in order to reduce expense and duplication of travel.

### WORKING PRINCIPLES OF AN ADEQUATE INDUSTRIAL MEDICAL SERVICE

"It is realized that small industrial organizations or plants do not require as extensive medical facilities as do the larger ones. Nevertheless, the principle implied in the Minimum Standard for Medical Service in Industry applies to both large and small plants. The type of medical department and the scope of the service may be adjusted to meet the needs of the establishment, but in general an adequate industrial medical service requires that the following provisions be made in order to render the best service:

1. A definitely organized plan for the medical service.

2. A definitely designated staff of qualified physicians, surgeons and attendants — with one physician in charge of the service.

3. Adequate emergency, dispensary and hospital facilities.

4. Preplacement and periodic physical examinations — to be made only by qualified medical examiners.

5. Efficient care of all industrial injuries and occupational diseases.

6. Reasonable first aid and advice for employees suffering from nonindustrial injuries and illnesses while on duty. For further professional care such employees should be referred to their own private or family physicians.

7. Education of the employee in accident prevention and personal hygiene.

8. Elimination or control of all health hazards.

9. Adequate medical records including physical examination records, accessibly filed in the medical department under responsible medical supervision. Statistical summaries and analyses of the injury and illness experience should be made periodically.

10. Supervision of plant sanitation and all health measures for employees by the physician or surgeon in charge.

11. An ethical and co-operative relationship with the family physician.

12. The use of hospitals approved by the American College of Surgeons."

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## EMPLOYMENT OF THE HANDICAPPED

With further reference to the important subject of employing handicapped workers, concerning which our section was devoted in last month's issue, the following true incidents of "human interest" are illuminating.

CASE 1—A totally blind worker at the Caterpillar Tractor Company in Peoria performs the unique job of sorting goggle lenses by color. In order to determine which color glass should go into which goggle, he holds the lense in the fingers of his left hand and passes his hand over a small light bulb. If he gets immediate transmission of heat through the glass he knows that it is clear. If the transmission is delayed for an almost imperceptable length of time he knows that the lens is colored amber and if the transmission of heat is delayed for a slightly longer period of time he knows that the lense is dark in color. Thus we see the results of a specialized job of placement.

CASE 2—A certain Illinois manufacturer is utilizing totally blind persons to sort sheets of mica into their different thickness classifications. This job previously had been done by sighted persons who had to use calipers in order to determine the proper thicknesses. Blind persons now do the same work and have stepped up production over 75% as compared to sighted persons. Movement does not detract their attention from their work, they do not handle an instrument, and they are utilizing both hands in feeling thicknesses of the mica sheets. Another example of good specialized placement.

CASE 3—Employment managers smiled rather skeptically when they were told that under certain conditions one-armed persons could perform more work or a greater number of operations than could two-armed persons. However, their smiles of skepticism changed to decided nods of approval when it was demonstrated to them that a one-armed person on an inspection job would reach over, pick up the article to be inspected, inspect it visually, and then place it in the proper recepticle as compared to a

two-armed person picking up the article with, let us say, the left hand, transferring the item to the right hand and then continuing the inspection procedure. In eliminating the one operation of transfering from right hand to left hand it was found that production was stepped up by sixty to seventy more pieces per hour. As a result the two-armed persons who previously had done this work were learning other jobs where two arms were necessary.

CASE 4—Another Illinois manufacturer is utilizing approximately 40 one-armed persons to pull levers or perform other operations requiring the use of only one arm. In this manner 40 two-armed persons are freed to perform jobs requiring full use of two arms.

CASE 5—In a large boiler factory where it is necessary for one person to be inside the boiler during an air hammer riveting process, persons with normal hearing were unable to work. This difficulty was overcome by employing totally deaf persons who, of course, did not experience the discomfort caused by the sound involved in the operation.

CASE 6—We have a number of instances on record in which persons of small stature were eagerly employed so that they might perform work in cramped situations, as for example some of the aircrafts where riveting or bolting operations inside of wings or cramped fuselage structures was involved.

## THE BRITISH JOURNAL OF INDUSTRIAL MEDICINE*

The *British Medical Journal* announces the publication commencing next January of an addition to the specialist journals published by the British Medical Association — the *British Journal of Industrial Medicine*. The project has often been discussed in recent years, and the final stimulus to action came in the shape of a formal request to the British Medical Association from the Association of Industrial Medical Officers. An editorial board was formed, and it was intended that Sir Henry Bashford, chief medical officer of the post office, would be editor in chief, but his recent appointment as medical adviser to the treasury prevents this. It is anticipated that Dr. Donald Hunter of the London Hospital will take his place. The other editors will be Dr. A. J. Amor, Dr. M. W. Goldblatt, Dr. D. C. Norris, Dr. Donald Stewart and Mr. R. W. Watson-Jones, a surgeon. The *British Medical Journal* says that since 1939 the country has been overwhelmingly conscious of the extent to which it owes its safety to the health of the worker in industry. Industrial medicine is not just industrial toxicology; in fact, this is but a small part of it. A whole range of problems face the worker, the management and the doctor — the effect on the worker and his work of temperature and humidity, of the intensity and direction of illumination, of posture and change of posture, of rest pauses and recreation, of washing facilities, of canteens and of an efficient accident service. There are also the important psychologic problems of monotony, relations between foreman and worker, selection of work and so on. From industrial medicine a steady flow of observation and research is hoped for, and much of this should find an outlet in the *British Journal of Industrial Medicine*.

*Journal of the A.M.A., Dec. 11, 1943.

## POST-GRADUATE COURSE IN INDUSTRIAL MEDICINE AND HYGIENE

Forty-two members enrolled for the Post-Graduate Course in Industrial Medicine and Hygiene at the University of Illinois College of Medicine, at the first session which began on January 4, 1944. This course is sponsored by the Committees on Industrial Health of Illinois State Medical Society and the Chicago Medical Society and is under the direction of the Division of Industrial Hygiene of the Illinois State Department of Public Health and the University of Illinois College of Medicine. The twelve weekly meetings will extend to March 28, being held each Tuesday evening at 7 P.M.

A man moved to a new boarding-house. After a week, he confessed to a fellow boarder that he could never remember the landlady's name. Said the other, "That's easy. Her name is Womack. Rhyme it with stomach. Here's where you get your stomach fed. Womack stomach."

The new boarder was grateful and the next morning when he came down to breakfast, he called out cheerily, "Good morning, Mrs. Kelly."

—Eleanor M. Garrett.

Case finding in tuberculosis has recently been undertaken on a stupendous scale. Careful estimates based on actual findings to date indicate that by the end of this year approximately 25,000 persons will have been diagnosed as in need of hospitalization who in ordinary times would not have been suspected of having tuberculosis. The armed forces are expected to include more than eleven million men by the end of 1943, all of whom will have been X-rayed except the first few hundred thousand inducted. The U. S. Public Health Service is carrying on an intensive case-finding campaign among certain groups of workers, which has been supplemented by local and state health agencies. Most of these newly found cases are asymptomatic; probably only a few have a history of contact or have ever been examined previously.

These estimates point to the need for greatly increased sanatorium facilities. For some time sanatoria have been closing wards and curtailing activities because of the lack of trained personnel. The mere effort to keep these hosiptals going in accordance with acceptable standards represents a serious undertaking. When to this is added the urgent need for greatly increased facilities, the responsibility indeed becomes tremendous. Mary Dempsey, Am. Rev. of Tb., July, 1943.

# News of the State

## PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

### POST-GRADUATE CONFERENCE

The Post-Graduate Committee of the Illinois State Medical Society in cooperation with the officers of Marion County Medical Society are making plans for a Post-Graduate Conference to be held at Centralia, the afternoon and evening of March 22nd. This meeting is for doctors of the southern section of the state and a most interesting program has been planned.

Subjects to be covered will be "Discriminate Use of the Sulfonamides," "Blood Dyscrasias," "Surgical Conditions of the Abdomen," "The Endocrines" and the Navy Public Relations is sending two talking movies on "Full Speed Ahead" and "Navy Men of Medicine."

It is hoped that doctors will make plans now to attend this very special meeting.

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The War Department has just announced that Charles Bernard Puestow was recently promoted from lieutenant colonel to colonel.

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Lt. Col. Leon L. Gardner, Medical Corps, has been designated executive officer of Gardiner General Hospital, 1660 East Hyde Park Blvd., Chicago. Col. Gardner recently returned from overseas service in India where he was commanding officer of an evacuation hospital unit. He has also served as assistant to the surgeon general and on the general staff of the War Department. He succeeds Lt. Col. W. R. Swanson as executive officer of Gardiner General Hospital.

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The first Charles L. Mayer Award of $2,000, administered by the National Science Fund of the National Academy of Sciences, was presented to Dr. Charles B. Huggins, Professor of Surgery at the University of Chicago, "for the most outstanding contribution during 1942 to present-day knowledge of factors affecting the growth of animal, cells with particular references to human cancer." Dr. Huggins won the award for his discovery that victims of cancer of the prostate can be considerably relieved and in some cases restored to health, at least temporarily, either by surgical removal of the male glands or by the administration of female sex hormones.

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Anton Julius Carlson, noted physiologist and professor emeritus of the University of Chicago, has been elected President of the American Association for the Advancement of Science. Dr. Carlson served as a lieutenant colonel under Herbert Hoover in feeding European victims of the first World War.

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In writing to the Journal to give his complete address, Capt. Adolph Gilula tells of his promotion and the fact that he certainly does "appreciate receiving the Journal regularly." Formerly in Cook County, Capt. Gilula has been in service since December, 1942.

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Col. Manfred U. Prescott. formerly of San Francisco, has been appointed post surgeon and senior medical officer at the Scott Field (Illinois) Army Air Forces Training Command radio school. Dr. Prescott graduated from the University of Illinois College of Medicine in 1923, practiced medicine in Chicago and taught anatomy and surgery at the University of Illinois. He joined the medical reserve as a lieu-

tenant in 1925 and was promoted to eaptain in 1929 and to major in 1935. He was called to aetive duty with the Army in June 1941 with the rank of lieutenant eolonel.

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Detlev W. Bronk, Johnson Professor of Biophysies, and Direetor, Eldridge Reeves Johnson Foundation for Medical Physies, University of Pennsylvania Sehool of Medieine presented the Seeond Walter Wile Hamburger Memorial Leeture before the Institute of Medicine on January 28th. This was an illustrated lecture on "Cardiovaseular Problems in Military Aviation."

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## COMING MEETINGS

February 15 — Macon County Medical Society — Deeatur — Evening, L. F. Weber, "Industrial Dermatoses" and Arkell M. Vaughn, "Surgical Treatment of Varieose Veins."

February 16 — DuPage County Medieal Society — Elmhurst Hospital — Evening, Harry L. Huber — "Allergy, What Is It?"

February 17 — Marion County Medical Soeiety — Centralia — Evening, Julius Jensen of St. Louis, "Reeent Advances and Modern Concept Regarding Hypertension."

February 18 — Will-Grundy County Medieal Society — Joliet — Noon.

February 25 — Will-Grundy County Medieal Soeiety — Joliet — Noon — Samuel J. Fogelson, "Gastro-Duodenal Ulcerative Disease."

February 25 — Staff Sherman Hospital — Elgin — Noon, Arthur R. Colwell, "Diabetes."

February 28 — 210th Regular meeting of The Chieago Soeiety of Internal Medieine, Drake Hotel, 8:00 P. M.

William A. Thomas and James Herbert Mitchell, "Histoplasmosis Report of a Case with Multiple Cutaneous Lesions."

N. S. Davis III, "The Role of Nutrition in the Etiology and Treatment of Hypertensive Cardiovaseular-Renal Disease."

S. W. McArthur and Howard Wakefield, "Observations on the Human Eleetroeardiogram Made During Experimental Distension of the Gallbladder."

Mareh 14 — Kankakee County Medical Society — Kankakee — Evening, Leon Unger, "Allergies, Hay Fever and Asthma."

## MARRIAGES

E. Thomas Brand, Woodstoek, Ill., to Mrs. Martha H. Brigham of Seneca, November 26, 1943.

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## DEATHS

Sadie Bay Adair, Chicago; John A. Creighton Medical School, Omaha, 1902. Held office as president of the American Medical Women's Association and edited its official bulletin for 25 years. Had praeticed medieine in Chicago more than 40 years. Died January 16, 1944 at the age of 75.

Bertram Robert Beers, Evanston, retired; University of Illinois College of Medicine, 1908. Died January 5, 1944 at the age of 62.

Walter H. Buhlig, Chicago; Northwestern University Medical School, 1903. Chief of medical staff at the Evangelical Hospital since its opening in 1910. Captain in the Medical Corps in World War I. Died January 15, 1944 at the age of 67.

Preston O. Carrico, Ashmore; Medical College of Indiana, Indianapolis, 1891. Had practieed medicine 53 years. Died December 31, 1943 at the age of 82.

George Henry Cleveland, Glencoe, retired; University of Michigan Medical School, 1882. Died December 19, 1943 at the age of 81.

Cornelius Gunderson, Chicago; University of Illinois College of Physieians and Surgeons, 1904. Former president and on staff of the Norwegian-American Hospital. Died January 17, 1944 at the age of 70.

Luther Anderson Hedges, Watseka; Chicago College of Medicine and Surgery, 1909. Served on staffs of Kankakee State Hospital and the Iroquois Hospital. Died November 15, 1943 at the age of 68.

William D. Henderson, Hamilton, retired; Starling Medical College, Columbus, Ohio, 1878. Had practiced medicine at Biggsville for 64 years. Died December 17, 1943 at the age of 90.

Theresa Jennings, Streator; Dunham Medical College, Chicago, 1901. Died January 6, 1944 at the age of 76.

Robert M. Laemle, Chicago; Rush Medical College, 1933. Instructor in obstetrics and gynecology at University of Illinois College of Medicine; associate obstetrician at Chieago Maternity Center. Died January 1, 1944 at the age of 40.

Ardsley H. McLaughlin, Aurora; Eclectic Medical College, Cincinnati, 1890. Practiced medicine in Aurora for 54 years. Died January 13, 1944 at the age of 75.

Carl Francis Schaub, Chicago; Loyola University School of Medicine, 1929. Associate clinical professor of ophthalmology and chairman of the department of ophthalmology at Loyola University School of Medicine and a member of the American Academy of

Ophthalmologists. Died January 7, 1944 at the age of 40.

Francis Sullivan, Kankakee; Rush Medical College, 1897. Was staff physician at the Kankakee state hospital for 35 years. Died of a cerebral hemorrhage, December 17, 1943 at the age of 66.

Jay Claude Simmons, Canton; University of Illinois College of Medicine, 1906. Had practiced medicine in Canton for 22 years. Died of a heart attack on December 22, 1943 at the age of 65.

Orlando G. Taylor, Palestine; University of Illinois College of Medicine, 1893. Practiced medicine in Palestine for 50 years. Died December 30, 1943 at the age of 80.

Ralph Randolph Trueblood, Lawrenceville; Hospital College of Medicine, Louisville, Kentucky, 1896. Was examining physician of the Indian Refining Company and for many years company physician for the Baltimore & Ohio and Big Four Railroads. Died suddenly of a heart attack January 6, 1944 at the age of 69.

Louis Emil Wedel, East St. Louis, retired; Barnes Medical College, St. Louis, 1909. Veteran of the Spanish-American War. Died December 16, 1943 at the age of 64.

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## SAYS MEDICAL REVOLUTION IS NOT NEEDED TO REMEDY MALDISTRIBUTION OF DOCTORS

The maldistribution of physicians during the next few years, indicated in a survey made recently by two officers of the United States Public Health Service, need not necessarily require a revolution in medical education or practice for its correction, *The Journal of the American Medical Association* for January 15 says, adding that improved hospital and laboratory facilities may produce the desired salutary effect. *The Journal* says:

"The effect of the war on the distribution of physicians has recently been discussed by G. St. J. Perrott and B. M. Davis. These investigators of the United States Public Health Service report a survey of the changes in the medical manpower picture. Moreover, they attempt an estimate of the changes to take place during the next few years.

"The war has withdrawn about one third of the active practitioners of medicine in the United States. The rate of decrease in the number of civilian physicians from Jan. 1, 1942 to the present time has been precipitous. There were more than 130,000 active private practitioners on Jan. 1, 1942; there will be only about 85,000 at the end of 1943. The recruiting of practicing physicians has already diminished greatly; the armed forces will obtain additional medical officers from among the graduating medical students. The services expect to take 80 per cent of all medical graduates; the number entering civilian practice will no longer fully replace those who die or retire. Consequently Perrott and Davis predict an annual net loss of about 2,100 for the period following Jan. 1, 1944.

"The rate of attrition, the authors predict, will tend to be most severe in the states which were medically poor before the war; these states generally have a high proportion of older graduates and receive an unduly low proportion of new medical graduates. New York, with about 10 per cent of the country's population, receives nearly 18 per cent of the new physicians; Alabama, with about 2 per cent of the population, receives but one third of 1 per cent. Twenty-eight states with a combined population of 54,500,000 are expected to have more than 1,500 persons per physicians by Jan. 1, 1944, and seven of these states, with 13,500,000 population, will have more than 2,000. During the past twenty years there has been a trend for the states rich in physicians to become richer and for the states poor in physicians to become poorer, largely because of the preference of new graduates to locate in the states which most encourage medical practice.

"The analysis by these officers of the United States Public Health Service serves to indicate certain aspects of the distribution of physicians, to which attention may well be directed in postwar planning for medical services. The situation described need not necessarily demand a revolution in medical education or medical practice for its correction. Improvement in the supply of hospital and laboratory facilities may promptly have a salutary effect."

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(A huge fee (for an operation) was mentioned.) "Ah, well, then," said Oscar, I suppose that I shall have to die beyond my means."—*R. H. Sherard, Life of Oscar Wilde.*

# P. R. N.

The Jocular Jingles of C. G. F.

by

Charles G. Farnum M. D.
Peoria, Ill.

## FLU

When your head feels as big as some freak whirligig
And you hurt from your dome to your toes;
When you ache down your back and you feel your bones crack
And hot water leaks out of your nose;
When with fever you burn and you tumble and turn
And the whole world has gone all askew;
When you shiver and freeze and you blow and you sneeze,
It is fearful and tearful old flu.

When you larynx is rough and your pharynx's a slough,
You're consumed by a horrible thirst,
You complain and repine at the chills up your spine,
For you feel like a soul that's accurst.
You've a horrible cough that you cannot shake off
And they fill you with grandmother's brew;
You've a sinus that throbs and the bed's full of knobs,
It is sickening, strickening flu.

Your poor head is abuzz, you've a tongue coating fuzz,
Your old heart, how it goes pit-a-pat!
You still shiver and freeze and are wobbly in knees,
You're as weak as a sick alley cat.
You don't care to talk and you scarcely can walk,
And you look at yourself in review,
Since you have no more pep, you must still watch your step;
'Twas depleting, maltreating old flu.

## FROZEN CALVES

I shivered near a high school,
Saw maidens hasten past
And most of them wore anklets
In spite of wintry blast.

I think the S. P. O. A. should
Not do its stuff by halves
And start a movement to protect,
Those poor half frozen calves.

I wish I were a druggist, a barber or a clerk
So I could stay in doors and do my daily round of work
Instead of going out each day to fight the ice and snow
With temperatures from zero down to 22 below.

## SPARTAN FEMALES

On a blustering
winter day
came an estimable
young woman
complaining of
frequent colds
and a constant cough.

Garbed was she
in a coat
with voluminous
fur collar.
But said coat
was worn
widely open
down to the waist.

Her blouse
was sheer
affording scant
protection to
her chest.

When remonstrated with
for so exposing
herself
in zero weather,
she replied
with finality,
"I dress this way
so I won't
catch cold,
and besides,
this is the way
you are supposed
to wear them."

A typical
example of
feminine logic —
argumentation
would be futile.

A few evenings
thereafter
I saw her at a
dinner dance.
The gown
she wore
on that
occasion
was obviously
designed to prevent lumbago.

# SHOULD VITAMIN D BE GIVEN ONLY TO INFANTS?

VITAMIN D has been so successful in preventing rickets during infancy that there has been little emphasis on continuing its use after the second year.

But now a careful histologic study has been made which reveals a startlingly high incidence of rickets in children 2 to 14 years old. Follis, Jackson, Eliot, and Park* report that postmortem examination of 230 children of this age group showed the total prevalence of rickets to be 46.5%.

Rachitic changes were present as late as the fourteenth year, and the incidence was higher among children dying from acute disease than in those dying of chronic disease.

The authors conclude, "We doubt if slight degrees of rickets, such as we found in many of our children, interfere with health and development, but our studies as a whole afford reason to prolong administration of vitamin D to the age limit of our study, the fourteenth year, and especially indicate the necessity to suspect and to take the necessary measures to guard against rickets in sick children."

*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

MEAD'S Oleum Percomorphum With Other Fish-Liver Oils and Viosterol is a potent source of vitamins A and D, which is well taken by older children because it can be given in small dosage or capsule form. This ease of administration favors continued year-round use, including periods of illness.

MEAD'S Oleum Percomorphum furnishes 60,000 vitamin A units and 8,500 vitamin D units per gram. Supplied in 10- and 50-cc. bottles and boxes of 48 and 192 capsules. Ethically marketed.

MEAD JOHNSON & COMPANY, Evansville 21, Ind., U.S.A.

# Important Wartime change in Biolac!

## Borden's complete infant formula

**To conserve vital tin, we are now packaging Biolac in 13-fl.-oz. cans instead of the former 16-fl.-oz. size. The new Biolac is more highly concentrated but the new smaller can contains identically the same food values.**

**Now each fl. oz. of Biolac should be diluted with 1½ fl. ozs. of water and not 1 fl. oz. as formerly.**

Briefly, the situation on Biolac is this . . .

When it became necessary to package Biolac in 13-fl.-oz. instead of 16-fl.-oz. tins, we set our chemists to work to concentrate the food elements to fit the container.

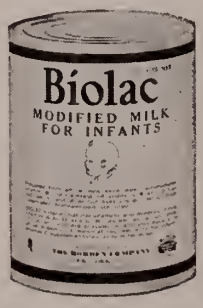
Tests of the new concentrate show *identical food* values in the smaller container. **The new container still makes one full quart of standard formula.**

Biolac still provides all nutritional needs of the young infant except vitamin C. **The price remains the same.**

**Change in Formula-Making Directions**

For standard formulas the new, more concentrated Biolac should be *diluted with 1½ parts water* (instead of using equal parts of Biolac and water).

For detailed information write to Borden's Prescription Products Division, 350 Madison Avenue, New York 17, N. Y.




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# BIOLAC

**Borden's complete infant formula**

ACCEPTED AMERICAN MEDICAL ASSN

*Biolac is prepared from whole milk, skim milk, lactose, vitamin $B_1$, concentrate of vitamins A and D from cod liver oil, and ferric citrate. Evaporated, homogenized, sterilized.*



# "See what a change . . . AFTER ONLY 10 DAYS!"

TEN DAYS after establishment of an ulcer regime with Amphojel, x-ray re-examination often reveals complete disappearance of the peptic ulcer niche.†

In addition to promoting rapid healing of the ulcer, Amphojel offers:

Prompt relief from pain . . .
Fewer recurrences . . .
Superior weight gain during treatment . . .
No alkalosis.

A Wyethical in 12 fl. oz. bottles. John Wyeth & Brother, Division WYETH Incorporated, Philadelphia.

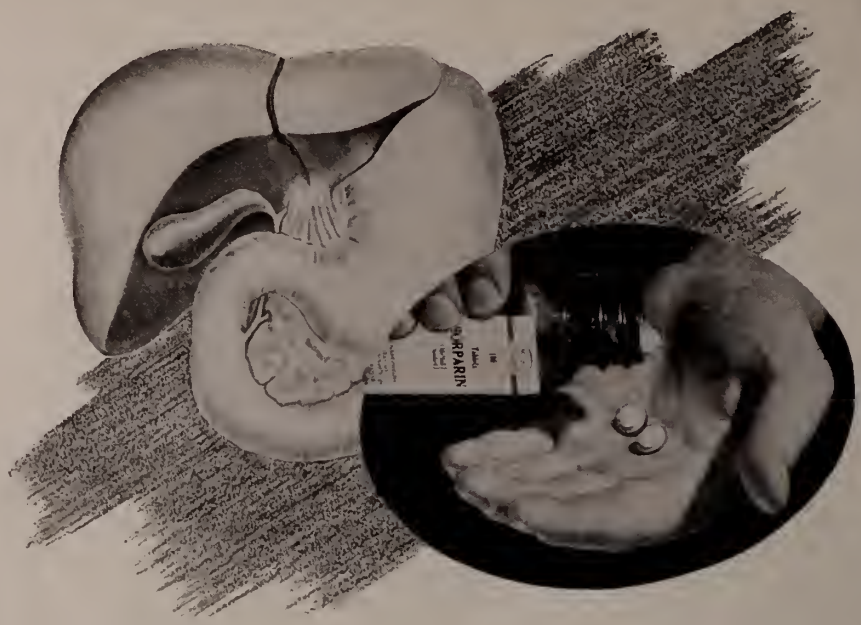
†WOLDMAN, E. E., and POLAN, C. C.: The Value of Colloidal Aluminum Hydroxide in the Treatment of Peptic Ulcer; A Review of 407 Consecutive Cases, Am. J. M. Sc. *198:* 155-164 (Aug.) 1939.



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Supplied in tablets, each containing 3 gr. Sorparin. Bottles of 100, 500 and 1000.

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COMPOSITION

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| Dextrins . . | 75% | Mineral Ash . | 0.25% |
| Maltose . . | 24% | Moisture . . | 0.75% |

Available carbohydrate 99%
115 calories per ounce

*Literature on request*

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'Dexin' helps to assure uncomplicated infant feeding because its high dextrin content (1) diminishes intestinal fermentation with resultant reduction in distention, colic and diarrhea and (2) promotes the formation of soft, flocculent, easily digested curds.

Formulas modified with 'Dexin' are palatable, and not excessively sweet. 'Dexin' is readily soluble in hot or cold milk. Supplied in containers of 12 ounces and 3 pounds.

'Dexin' reg. U. S. Patent Office

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*Trifles make perfection, and perfection is no trifle!*

Michelangelo

This was the creed of Michelangelo. Trifles—menial tasks and lesser elements of precision—always merited his most careful personal attention in his constant aim for perfection.

Similarly, the pharmaceutical chemist has exercised meticulous care and scientific precision in the complex manufacture of the organic iron preparation, Arsenoferratose Elixir. Skillful blending of selected ingredients and diligent attention to numerous so-called "trifles" have contributed to produce its superb palatability and perennial efficiency. Indeed, in the minds of many physicians, Arsenoferratose Elixir is "the iron tonic of perfection" for *all those anemias known to be benefited by iron therapy.*

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*Literature and samples on request*

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influence of hygroscopic agents in cigarettes*



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*Average edema upon instillation of smoke solution from* **PHILIP MORRIS CIGARETTES.**



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**EDEMA 2.7**

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**CLINICAL CONFIRMATION:**** When *smokers* changed to PHILIP MORRIS, every case of irritation of the nose and throat due to smoking cleared completely or definitely improved.

**Proc. Soc. Exp. Bio. and Med., 1934, 32, 241-245. ***Laryngoscope, 1935, XLV, No. 2, 149-154.*

TO THE PHYSICIAN WHO SMOKES A PIPE: We suggest an unusually fine new blend — COUNTRY DOCTOR PIPE MIXTURE. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

# Book Reviews

Reaction to Injury. Pathology for Students of Disease Based on the Functional and Morphological Responses of Tissues to Injurious Agents. By Wiley D. Forbus, M.D., Professor of Pathology, Duke University and Pathologist to the Duke Hospital. 532 illustrations, 20 of which are in color. Baltimore. The Williams and Wilkins Company, 1943. Price $9.00.

This book should be of special interest to the student of pathology, particularly those of the graduate group. However, if the reader goes over the first few chapters before reading the remainder of the book, he will obtain an inaccurate conception of its value, since the first few chapters are wordy and philosophical rather than scientific. Throughout the book the author adds clinical data to his discussion, and thereby correlates his pathological discussion with the clinical phase of the subject. He likewise, discusses the physiological aspects, thereby presenting a fairly complete picture of the subject under discussion. In general, he adheres to the commonly accepted theories, and rarely emphasizes the unusual explanations. If anything, the author is too reluctant to include modern thoughts. An example of this is failure to stress the chemical factors in the pathogenesis of cholecystitis. Too much emphasis is placed on bacterial invasion in this disease. When several theories exist they are usually presented, thereby allowing the reader to form his own opinion as to the value of the respective theories. The reviewer was gratified to see the theory of sentization of body tissue to bacterial toxins emphasized in the discussion of the disease itself. The author is apparently very interested in parasitology, since he never fails to mention parasites as the etiologic factor in diagnosis.

There are numerous splendid colored plates in the book. The discussion of virus infection is thorough and adequate. The discussion of Rickettsia disease is somewhat meager. The photomicrographs illustrating some of these diseases are very poor. Some of his statements regarding immunological possibilities are perhaps too pessimistic, particularly so, is his discussion of the protection against typhus fever with vaccine. Although it is difficult to classify various disease from the pathological standpoint, yet the procedure of utilizing "granulomatous disease" as a major classification does not add greatly to the pathologic conception of the disease, although it is a safe classification. W.H.C.

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Clinical Audiometry; C. C. Bunch, M.A., Ph.D., C. V. Mosby Company, St. Louis. 175 pages; 1943; Price $4.00.

The author has produced an extremely interesting book, which merits the approval of every Otologist from both a scientific and a practical viewpoint. He has that unique ability to present a scientific subject in such a way as to constantly hold the interest of the reader.

The subject, although relatively a new one, is nevertheless highly important, and the book itself is the best evidence that the author has had a great deal of experience along this line, and has spent much time indeed in careful research.

(*Continued on page* 42)

# AN *Effective* BARRIER



Competent clinical investigation has established the effectiveness of a properly fitted occlusive diaphragm. Attention, however, should be directed to the need of not only providing for the protection but also the comfort of the patient, in order to assure continued use of the diaphragm.

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### May Be Lessened by a
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Non-pathological

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BOOK REVIEWS (Continued)

The book is divided into nine chapters, which in turn presents an excellent description of the tuning fork tests, and a criticism of each; description of the audiometer, and an explanation of the advantages and disadvantages of the different types manufactured; technic of audiometer tests including tests for malingering; the sound proof room; conductive and perceptive types of deafness; the use of the Audiometer in selecting a hearing aid.

The information in chapter VIII on the use of residual hearing is well worth the price of the book alone, and will be of much interest to the Otologist. The last chapter deals with the development of the Audiometer, and is most interesting to the reviewer.

The book is well written, and it serves its purpose well, in giving much valuable information to the Otologist concerning a modern, highly important subject.

F. C. W., M.D.

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Symptoms and Signs in Clinical Medicine. By E. Noble Chamberlain, M.D., M.Sc., F.R.C.P., Lecturer in Medicine, University of Liverpool, Physician to Out-patients, Royal Liverpool United Hospital, Royal Infirmary Branch, Visiting Physician, Smithdown Road Hospital, Liverpool, Formerly Beit Memorial Research Fellow. Third Edition; Printed in Great Britain. 456 pages; 346 illustrations, 19 in colour; Price $8.00. A William Wood Book; The Williams and Wilkins Company, Baltimore, 1943.

Although this is the third edition of the book, each of the previous editions were reprinted. It was the intention of the author in developing this book, to thoroughly acquaint the student and intern of the necessity of correlating as well as first recognizing, clinical signs, and the history elicited from the patient. This is his real initiation into the art of medicine, in contrast with the sciences of anatomy and physiology which he has been interested in prior to this time. He is taught to visualize symptoms and signs as forming a clinical picture of a definite pathological process. He is taught to be observing at the time he is acquiring a complete history of the patient, and the sequence of symptoms as they have arisen. A practical method of taking an accurate history is well described. The chapter on

(*Continued on page* 44)



# A W O L

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The voluntary choice of remaining at home during two or three days of the menstrual period cuts sharply into the attendance of many women at critical war work.

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## BOOK REVIEWS (Continued)

external characteristics of disease is well written, and much valuable information is given in a highly interesting and practical manner.

In turn, the respiratory system, cardio-vascular system, genitourinary system, digestive system, hematopoetic system and nervous system, with the histories, symptoms, and clinical findings are well described. The commoner laboratory methods of diagnosis in these conditions are given proper consideration.

An interesting chapter is added to this edition on the examination of sick children, with general information as to the procedure which should be used to arrive at the final diagnosis, are well outlined in much detail. Another interesting chapter on radiology and its use in making a clinical diagnosis has been added.

The final chapter on clinical pathology and biochemistry will indeed be of much value to the student, intern and to the practitioners of medicine who desire refresher information on these highly important subjects.

The book is well written, is interesting in its entirety and should be of value to students primarily, but also to many physicians desirous of refreshing their memories and obtaining the latest information concerning developments in clinical medicine from a diagnostic standpoint.

---

# Books Received

**The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.**

HUMAN CONSTITUTION IN CLINICAL MEDICINE. By George Draper, M.D., Associate Professor of Clinical Medicine, College of Physicians and Surgeons, Columbia University, Associate Attending Physician, Presbyterian Hospital, New York City, C. W. Dupertuis, Ph.D., Physical Anthropologist, Constitution Clinic, Presbyterian Hospital, New York City, and J. L. Caughey, Jr., M.D., Med. SCI. DI, Associate

(*Continued on page* 46)




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## BOOKS RECEIVED (Continued)

in Medicine, College of Physicans and Surgeons, Columbia University, Assistant Physician, Presbyterian Hospital, New York City. 273 pages; Paul B. Hoeber, Inc., Medical Department of Harper & Brothers, New York, London. Price $4.00.

CHILDBIRTH WITHOUT FEAR. The Principles and Practice of Natural Childbirth. By Grantly Dick Read, M.A., M.D. 259 pages. Harper & Brothers Publishers, New York and London. Price $2.75.

THE PERMEABILITY OF NATURAL MEMBRANES. By Hugh Davson, D. Sc., Associate Professor of Physiology at Dalhousie University, Canada, formerly Demonstrator in Biophysics and Beit Memorial Fellow, University College, London, and James Frederic Danielli, D. Sc., A. I. C., Beit Memorial Research Fellow and Fellow of St. John's College, Cambridge, England. With a foreword by E. Newton Harvey, Professor of Physiology in Princeton University, U. S. A. 361 pages. Cambridge: at The University Press; New York: The MacMillan Company. Price $4.75.

ARE YOU ALLERGIC? By Jessamine Hilliard and Charles C. Coghlan, M.D. 248 pages. M. Barrows & Co., Inc., New York, Price $2.50.

HEALTH EDUCATION ON THE INDUSTRIAL FRONT. The 1942 Health Education Conference of the New York Academy of Medicine. 63 pages. Columbia University Press, New York. Price $1.25.

THE MEDICAL CLINICS OF NORTH AMERICA. Chicago number. Cardiovascular and Blood Diseases. 289 pages. W. B. Saunders Company, West Washington Square, Philadelphia.

ESSENTIALS OF DERMATOLOGY. By Norman Tobias, M.D., Senior Instructor in Dermatology, St. Louis University; Assistant Dermatologist, Firmin Desloge and St. Mary's Hospitals; Visiting Dermatologist, St. Louis City Sanitarium and Isolation Hospital; Fellow American Academy of Dermatology and Syphilology; Diplomate, American Board of Dermatology and Syphilology. 495 pages. J. B. Lippincott Company. Price $4.75.

APPLIED DIETETICS. The Planning and Teaching of Normal and Therapeutic Diets. By Frances Stern, Chief of Frances Stern Food Clinic, The Boston Dispensary, Assistant in Medicine, Tufts College Medical School, Special Instructor in Dietetics in Social Service, Simmons College, The School of Social Work, Associate in Nutrition, Simmons College, School of Home Economics. Second Edition. 265 pages. The Williams & Wilkins Company. Price $4.00.

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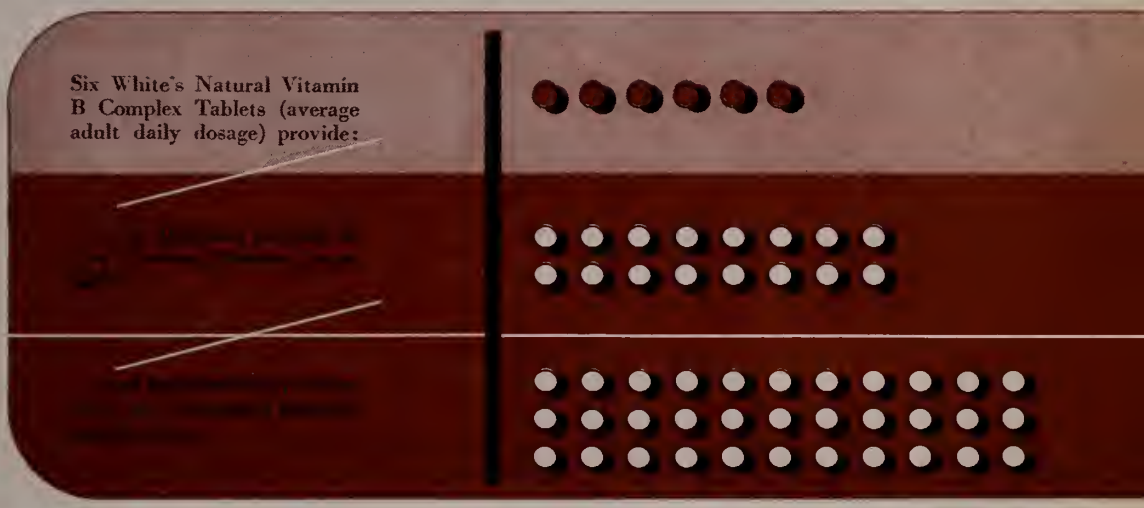
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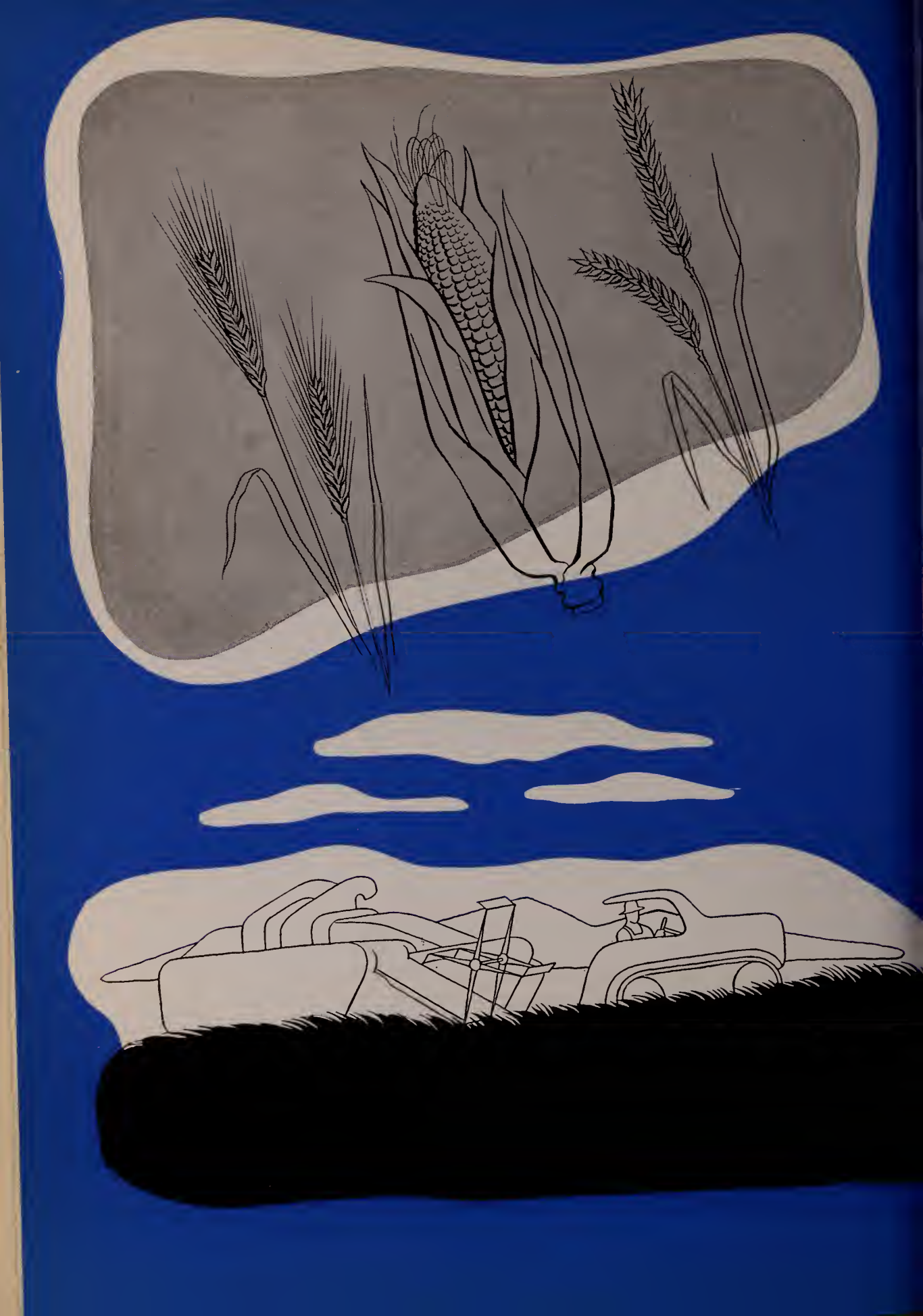
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# Pin-up picture for the man who "can't afford" to buy an extra War Bond!

YOU'VE heard people say: "I can't afford to buy an extra War Bond." Perhaps you've said it yourself . . . without realizing what a ridiculous thing it is to say to men who are dying.

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In fact, if you take stock of your resources, and check your expenditures, you will probably find that you can buy an *extra* $200 . . . or $300 . . . or even $500 worth of War Bonds.

Sounds like more than you "can afford?" Well, young soldiers can't afford to die, either . . . yet they do it when called upon. So is it too much to ask of us that we invest more of our money in War Bonds . . . the best investment in the world today? Is that too much to ask?

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MINERAL OIL IN FOOD (Continued)

passage from the mouth to the anus). Many physicians consider mineral oil preparations the laxative of choice. "It is probable," the Council says, "that under medical supervision mineral oil can be properly used, but the ease of obtaining the preparations as well as other laxative drugs readily leads to abuse. Proctologists (specialists in diseases of the rectum) have experienced difficulty in visualizing the wall of the rectum because of an adhering film of oil in persons who take the liquid petrolatum. The seepage of mineral oil is well known to be one of the discomforts that may attend the use of this substance. J. W. Morgan has written forcefully about the need of caution in the use of liquid petrolatum. He has mentioned a syndrome ( a set of symptoms occurring together) to which he has ascribed the term 'mineral oil poisoning' which may result from the continual oral (by mouth) administration of liquid petrolatum and which is relieved by discontinuance of the oil together with supportive measures to overcome the weakness which accompanies this syndrome. The most frequent signs and symptoms are anorexia (loss of appetite), indigestion, flatulence (gas), fatigue, nervousness, dyschesia (constipation) and anal leakage, accompanied in many cases by considerable loss of weight."

Commenting on the Council's report, *The Journal* says:

"Basically, salad dressings made with mineral oil cannot be differentiated, except in a laboratory, from ordinary products containing true fast or oils like olive oil. Such products are

(*Continued on page* 56)

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MINERAL OIL (Continued)

frequently bought in large amounts by hotels and restaurants. The person who receives a salad on which such a dressing has been placed has no idea as to the nature of the material that is being used. Mineral oil is plentiful; it can be purchased without ration points and can be sold much more cheaply than can olive oil or other vegetable oils. . . . Sometimes such products are sold in one to five gallon containers purchased largely by hotels and restaurants, since householders do not use such quantities. There are, for instance, a product called Thallon-Naise made in New York, a mayonnaise packed for H. L. Barker, Inc., New York, a mineral oil dressing made by J. H. Filbert Inc., Baltimore, a product called Slenderit manufactured by Marquis Products Company of Portland, Ore., and Beck's Pure U. S. P. Mineral Oil furnished by Beck's Mayonnaise Products of Davenport, Iowa, as well as others. Mineral oil is used in the baking industry in the place of animal and vegetable oils.

"Certainly the consumer should have the right to know the nature of the substance that he is using and the possible harmful effects associated with the substitution of liquid petrolatum for what he considers to be a food."

## DESCRIBES METHOD WHICH MAY COMBAT THE SHOCK FROM BURNS

### Preliminary Report On Sodium Lactate By Mouth Instead Of Plasma Transfusion Is Made By New York Physician

A possible means of combating the frequently fatal shock that accompanies severe, extensive, third degree burns is described in *The Journal of the American Medical Association* for January 22 by Charles L. Fox Jr., M.D., New York, in a preliminary report on the administration by mouth of sodium lactate solution instead of administering plasma by injection into a vein. (Sodium lactate is an organic salt found in sour milk, certain other substances and in the arterial blood plasma.)

"The results were so successful as to warrant further extensive trial of this therapy," he says. "There was but one death (which occurred with-


in whooping cough

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in four hours after admission) in 17 cases of full thickness (third degree) burns."

As Dr. Fox points out, "The shock syndrome which follows severe burns is accompanied by hemoconcentration (concentration of the blood corpuscles) and diminished plasma volume." Recently plasma transfusions have been used as a means of restoring the diminished plasma volume.

"Recent accounts of two catastrophes involving many burn cases, the Japanese attack at Pearl Harbor and the Cocoanut Grove fire in Boston," Dr. Fox says, "have indicated the relatively high mortality from severe burns even when large amounts of plasma are used. The English experience with serum or plasma also revealed a high mortality from burn shock."

He points out that recent investigations have revealed that when large plasma transfusions were administered soon after the receipt of the burn, there was not as great a rise in the plasma volume as had been anticipated, and, as a rule, the rise that was obtained proved to be only temporary. As far back as 1926, Dr. Fox says, the late Dr. E. C. Davidson advised the administration of sodium chloride (common table salt) in severe burns instead of dextrose solutions, because Davidson had observed that the plasma chlorides of patients suffering skin burns were low and the urine almost devoid of sodium chloride for as long as three weeks after the burn, in spite of adequate salt intake.

The procedure reported by Dr. Fox involved the immediate administration by mouth of large amounts of a chilled sodium lactate solution and at fifteen minute intervals thereafter on schedule. Any vomiting, which frequently occurs in severe burns, was treated by the administration of more fluid, and frequently a small tube was passed through the nose and connected with a drip apparatus so that the sodium lactate was administered constantly. A very careful record of fluid intake is necessary and the urinary output has to be carefully watched and all urine collected.

All cases of heat burns admitted to Harlem Hospital since Feb. 1, 1943 and 1 case of severe burns admitted to the Babies Hospital have been treated according to this procedure. The local treatment of the burns involved the application

(*Continued on page* 58)

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## SHOCK FROM BURNS (Continued)

of an ointment containing tannic acid and either sulfadiazine or sulfathiazole.

"In general," Dr. Fox says, "the large volumes of fluid were well tolerated; the patients wanted water to drink but after a short time became accustomed to the lactate and drank copiously of their own volition. Occasionally, frequent vomiting occurred and was treated by passing a Levine tube and administering the lactate by steady drip. When the initial vomiting persisted, intravenous infusion was used temporarily to support the circulation until the stomach became adjusted to receiving the steady flow of sodium lactate. . . .

"As these cases required from one to eight skin grafting operations, the extent of full thickness burn could be definitely ascertained. The results in these severe burns constitute prima facie evidence of the therapeutic efficacy of large amounts of oral sodium lactate instead of intravenous plasma. . . ."

Dr. Fox says that the observations by Davidson on the disappearance of the chlorides from the urine were strikingly confirmed in the series of cases he reports. Further studies of the redistribution of sodium by the body are in progress, and an extension of the studies he and his colleagues have already inaugurated may answer, he says, the important question as to whether a judicious combination of small amounts of plasma with sodium lactate might be more effective than sodium lactate alone.

"Whatever may be the ultimate conclusion about the added benefit of small amounts of plasma," Dr. Fox continues, "the fact that extensively and severely burned patients survived

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and recovered after the oral administration of isotonic sodium lactate instead of the intravenous injection of plasma, proves that correction of the sodium imbalance is of major importance. . . .

"The simplification in the care of such patients is worth noting. Intravenous therapy is dispensed with and the medical staff and nurses are relieved of this burden. The sodium lactate costs but a few cents and the hospital supplies of blood and plasma are conserved. The problems of sterile solutions are eliminated.

"It is scarcely necessary to mention the military advantages of the simplification of shock therapy that would follow conclusive demonstration of the efficacy of this treatment of burn shock. For the present at least, the emergency use of this method under circumstances in which plasma is not immediately available seems clearly indicated. . . ."

He admonishes, however, that final judgment on this method should await more complete reports.

## FIND INFLUENZA VIRUS A IS ONE OF CAUSES OF PRESENT EPIDEMIC

### Ann Arbor Men Say, However, Their Study Showed Neither A Nor B Alone Involved In Outbreak Of Respiratory Disease

Influenza virus type A is one of the causes of the present epidemic of respiratory disease, Jonas E. Salk, M.D., Wilbur J. Menke, M.D. and Thomas Francis Jr., M.D., Ann Arbor, Mich., report in *The Journal of the American Medical Association* for January 8. Their investigations

(*Continued on page* 60)

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## INFLUENZA VIRUS (Continued)

showed, however, that a definite proportion of the illnesses involved in the outbreak they studied was not due to influenza A or B.

"Under the direction of the Influenza Commission of the Board for the Investigation and Control of Influenza and other Epidemic Diseases in the United States Army," the three men explain, "observation posts have been set up in various parts of the country for early detection of influenza in Army personnel.

"In the Virus Laboratory of the University of Michigan School of Public Health, such observations have been carried out for more than a year. On May 28, 1943 in the course of one of many routine surveys, several patients ill with influenza were seen at the Station Hospital, Fort Custer, Michigan. A strain of influenza virus, type A (Weiss), was isolated from the throat washings of 1 of these men, and in 2 other cases positive serologic evidence of type A infection was obtained. Since no epidemic prevalence of influenza or other respiratory disease was noted at that time and the usual seasonal decline followed, it appeared that type A influenza virus could be the cause of sporadic disease.

"From the middle of October 1943 the Army Specialized Training Program Unit at the University of Michigan was under constant detailed observation for respiratory disease. On Nov. 17 and 18, 1943 several cases resembling mild influenza appeared at sick call. On November 18 throat washings from 4 of these were inoculated intranasally (into the nose) into ferrets and mice. . . ."

The investigation showed that 2 of the patients had influenza virus type A, while the other 2, with clinically similar illnesses, failed to yield any evidence of the presence of influenza A or B.

"The present report," the three physicians say, "serves to detail the detection of influenza virus type A, at the onset of an eipdemic in a Middle Western post before the disease was known to be present in other parts of the country."




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# The ILLINOIS Medical Journal

VOL. 85 NO. 3

March, 1944

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## Industrial Ophthalmology and Otolaryngology

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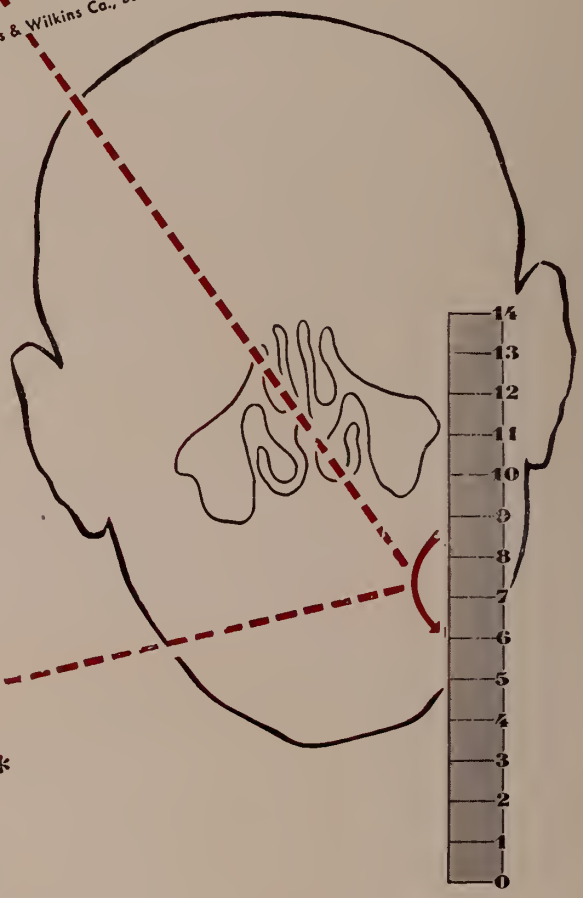
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1. Fabricant, N. D., Nasal Medication, Williams & Wilkins Co., Balt., Md.—1942




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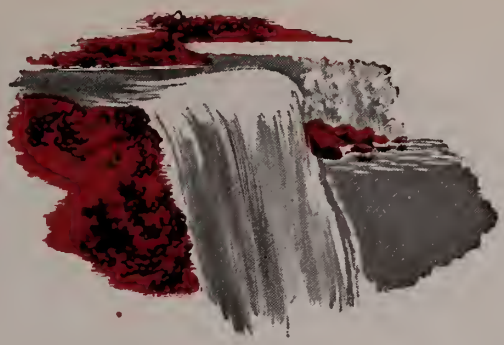
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* B. Zondek, *J.A.M.A.*, 118: 705, 1942. M. Berlind, *J. Clin. Endocrinol.*, 3: 457, 1943

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[1] TURNBULL, F. M., *et al.: J.A.M.A.* 123:536, Oct. 30, 1943.
[2] TURNBULL, F. M., *et al.: Laryngoscope* 53: 533, Aug. 1943.
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|---|---|
| Dried Ferrous Sulfate.....0.20 Gm. | Niacinamide.....2.50 mg. |
| Thiamine HCl ($B_1$).....0.25 mg. | Pantothenic Acid*.....0.40 mg. |
| Riboflavin ($B_2$)...0.19 | Choline*.....10.0 mg. |

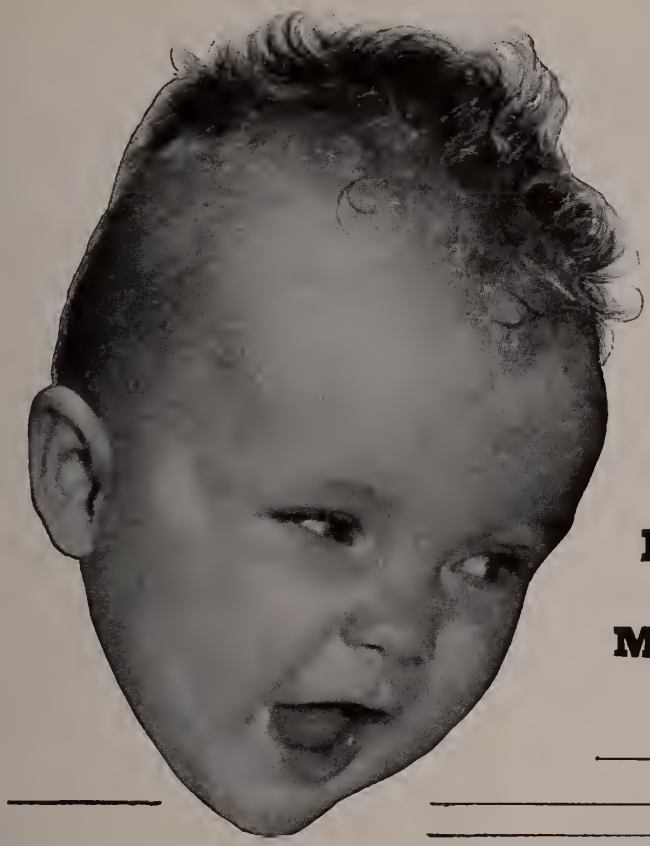
Total unfractionated aqueous extract derived from 9 Gm. of whole liver and artificial flavoring.

*The need for Pantothenic Acid and Choline in human nutrition has not been established

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A UNIT OF AMERICAN CYANAMID COMPANY

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# "A MAN OF FEW WORDS AND FEWER MINUTES—THAT'S MY DOCTOR!"



"HE BALKS more than ever these days at doing things the hard way, the wordy way, the long way.

"That's one reason he made a point of looking into S-M-A. And then put *me* on it so enthusiastically.

"He welcomed a sound formula that freed him from repeated juggling and re-calculations with milk, carbohydrate, water. It was a help to find that he could explain to a mother or nurse in just two minutes how to mix and feed S-M-A*.

"*But, best of all, he feels certain that he is prescribing an infant food that closely resembles breast milk in digestibility and nutritional completeness!*

"Is he *happy* today about what S-M-A has done for me! I can tell, whenever he checks me over. And is Mommy happy, too! And am *I!*

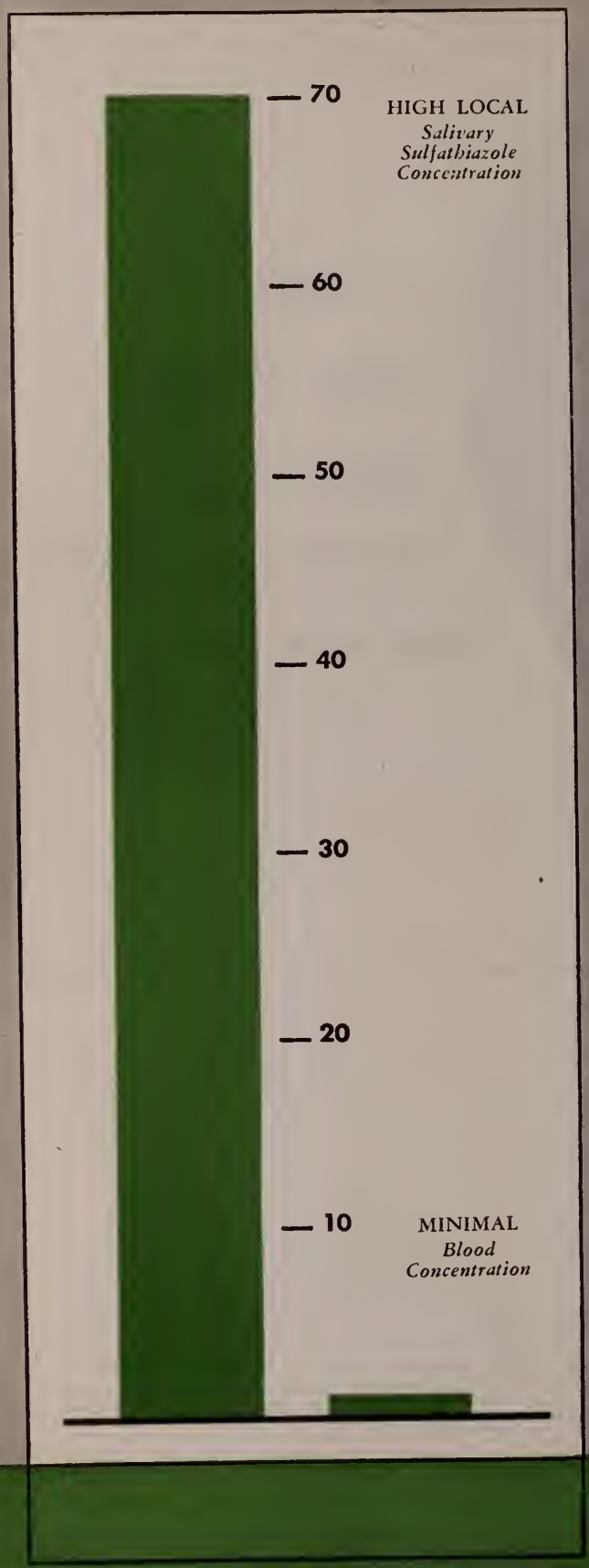
"I can tell you—EVERYBODY'S happy if it's an S-M-A baby!"

**One S-M-A measuring cup powder to one ounce water.*

**S-M-A** is derived from tuberculin-tested cow's milk, the fat of which is replaced by animal and vegetable fats, including biologically tested cod liver oil, with milk sugar and potassium chloride added, altogether forming an anti-rachitic food. When diluted according to directions, S-M-A is essentially similar to human milk in percentages of protein, fat, carbohydrate, ash, in chemical constants of fat and physical properties. A nutritional product of the S.M.A. Corporation, Chicago, Division WYETH Incorporated.

*Everybody's* **HAPPY IF IT'S AN SMA BABY!**

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# CHEMOTHERAPY ON THE SPOT WITH

*White's*

# *Sulfathiazole Gum*

THIS new technique of local chemotherapy makes possible a high *topical* concentration of dissolved sulfathiazole throughout the entire oropharyngeal area—and for prolonged periods. Yet even with maximal dosage—and even in children—blood levels of the drug are so very low that there is minimal risk of the untoward reactions frequently associated with *systemic* treatment with sulfonamides.

One tablet, chewed for one-half to one hour, promptly initiates a high salivary concentration of locally active (dissolved) sulfathiazole—and *maintains* throughout the maximum chewing period an average concentration of 70 mgm. per cent.

Yet an average adult, chewing a total daily dosage of 8 tablets, for as long as an hour each, does not develop a blood level of sulfathiazole greater than 1 mgm. per cent.

The advantages of this new technique for treatment of sulfonamide-susceptible infections of oropharyngeal areas are obvious. White's Sulfathiazole Gum is supplied in packages of 24 sanitaped tablets, in slip-sleeve prescription boxes—on prescription only. White Laboratories, Inc., Pharmaceutical Manufacturers, Newark 7, New Jersey.

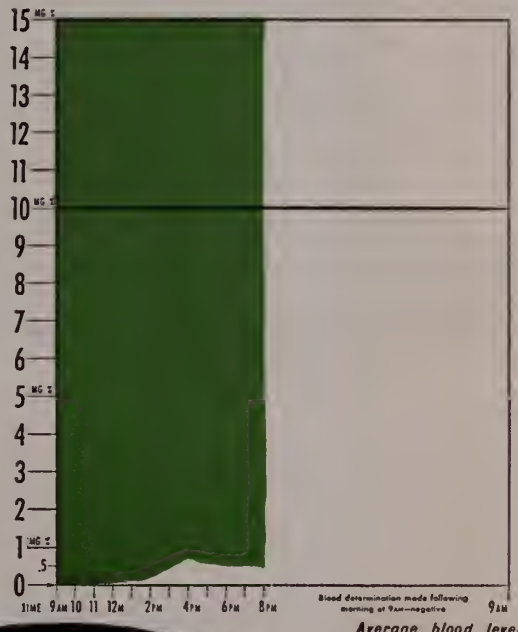
***Generally maintained blood level in systemic therapy: 5 to 15 mg. percent (average 10 mg. percent).***

Chart contrasts sulfonamide blood level commonly maintained in *systemic* treatment, with that attained even with maximal dosage of Sulfathiazole Gum.

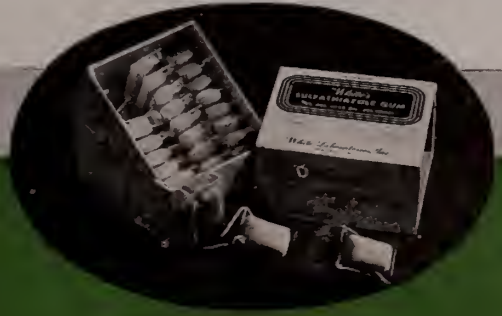
White area represents the sulfathiazole blood levels in an experimental adult group (average weight—153 pounds), each chewing 24 Sulfathiazole Gum Tablets over a 12-hour period. (Two tablets chewed every hour for one-half hour.) Sulfathiazole blood determinations were done at the intervals indicated on the base-line of chart. At no time was a level even as high as 1 mgm. % reached.

In an experimental group of children and adolescents, each of whom chewed 12 tablets of White's Sulfathiazole Gum, each tablet for one-half hour every hour, similar low blood levels were attained.

Since, in systemic therapy with sulfonamide compounds, blood levels of 5 to 15 mgm. % (averaged in green portion of chart as 10 mgm. %) are generally maintained, the use of White's Sulfathiazole Gum—even with maximal dosage—virtually obviates toxic reactions frequently associated with systemic treatment.




***Average blood level attained with maximal dosage of Sulfathiazole Gum.***




# *White's Sulfathiazole Gum*

# 3 Indications

**CONSTIPATION**
**COLITIS**
**DIARRHEA**




# One Therapy

**ZymenoL** is indicated in either the irritable, unstable or stagnant bowel because it is a *natural approach* to the two basic problems of Gastro-Intestinal Dysfunction;

**ASSURES NORMAL INTESTINAL CONTENT**
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. . . with COMPLETE NATURAL VITAMIN B COMPLEX*

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**Teaspoon Dosage** **Economical** **Sugar Free**

*ZymenoL contains Pure Aqueous Brewers Yeast (no live cells)

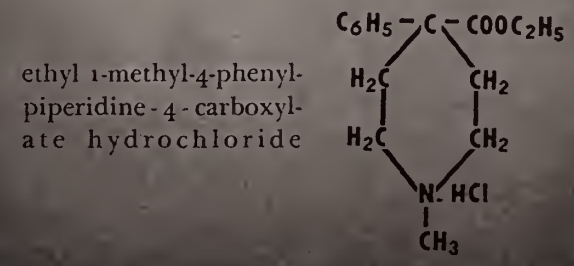
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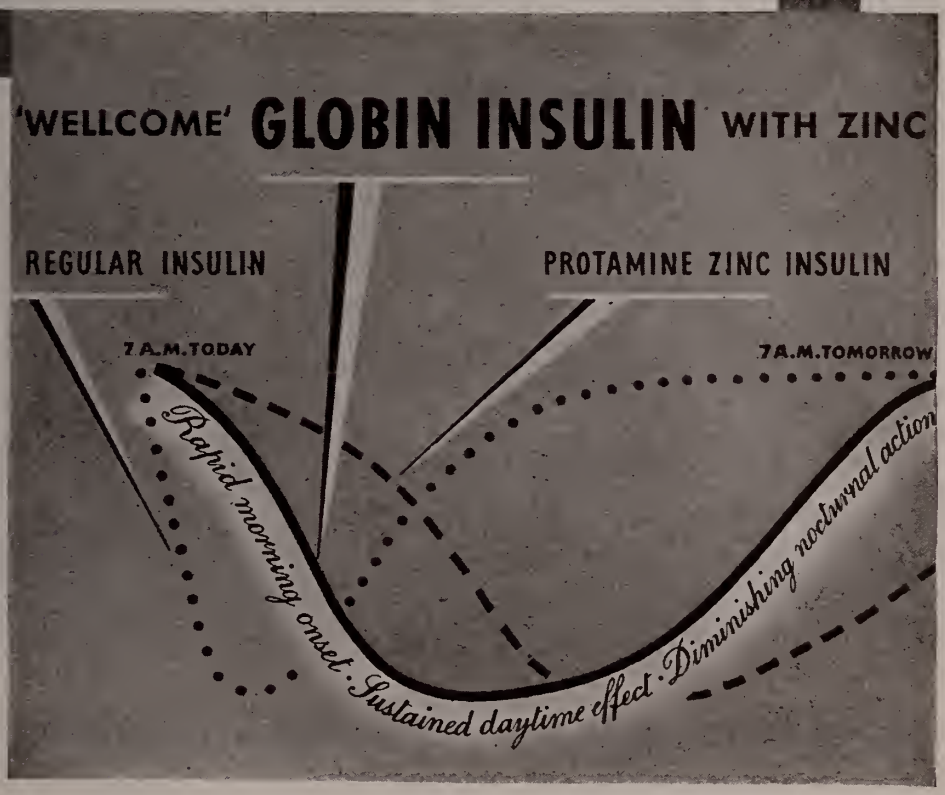
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* *Laryngoscope, Feb. 1935, Vol XLV, No. 2, 149-154*

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Super D Concentrate is preferred for all infants, premature or term, for growing children and adolescents because, besides being an excellent source of vitamin D, it is rich in natural vitamin A. Park[1] has stressed that "preparations which combine A and D be chosen in preference to those which contain D alone."

A daily dose of 5 drops of Super D Concentrate assures 500 U. S. P. units of vitamin D and 5,000 U. S. P. units of vitamin A. Available in 5 cc., 10 cc., and 30 cc. bottles with droppers.

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1. Park, E. A.: in The Vitamins, Chicago, American Medical Assn., 1939, p. 513.

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**ELIXIR B-PLEX** *Wyeth's* **THE NATURAL VITAMIN B COMPLEX**

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# Fighter with Foods



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# NUTRITIONAL ANEMIA

# IN INFANTS

## REASONS FOR EARLY FEEDING OF PABLUM (OR PABENA)

1. The infant's initial store of iron is rapidly depleted during the first months of life. (Mackay,[1] Elvehjem[2]). About 30% of the iron freed from the hemoglobin during the first two months is lost, and while hemoglobin destruction takes place, all infants are in negative iron balance. (Jeans,[3] and Usher, et al.[4]).

2. During the early months of life the infant obtains very little iron from milk — 1.44 mg. per day from the average bottle formula of 20 ounces or possibly 1.7 mg. per day from 28 ounces of breast milk. (Holt,[5] Jeans[3]). The incidence of nutritional anemia has been found to be high among infants confined largely to a diet of cow's milk. (Davidson, et al.[6] Usher, et al.,[4] Mackay[1]).

For these reasons and also because of the low hemoglobin values so frequent among pregnant and nursing mothers (Strauss,[7] and Gottlieb and Strean[8]), the pediatric trend is constantly toward the addition of iron-containing foods at an early age, both to normal infants and those with pylorospasm. (Neff,[9] Blatt,[10] Brennemann,[11] Monypenny[12]).

## THE CHOICE OF THE IRON-CONTAINING FOOD

1. Many foods high in iron actually add very little to the diet because much of the mineral is lost in cooking or because the amount fed is necessarily small or because the food has a high percentage of water. Strained spinach, for instance, contains only 1 to 1.4 mg. of iron per 100 Gm. (Bridges[13]).

2. To be effective, food iron should be soluble. Some foods fairly high in total iron are low in soluble iron. Thus egg yolk and liver have less soluble iron than does farina, which is very low in total iron. (Summerfeldt[14]). Oxalate-containing leafy vegetables are low in soluble iron and appear not to be well utilized as a source of iron by infants. (Kohler, et al.,[15] and Stearns[16]).

3. **Pablum (and Pabena) are high both in total iron (30 mg. per 100 Gm.) and soluble iron (7.8 mg. per 100 Gm.) and can be fed in significant amounts at an early age, without digestive upsets. (Blatt,[10] Monypenny[12]). Clinical studies of sick and well babies have shown Pablum to be of value in raising hemoglobin values (Crimm, et al.,[17] Summerfeldt and Ross[18]), even when egg yolk and spinach were not effective (Stearns[16]).**

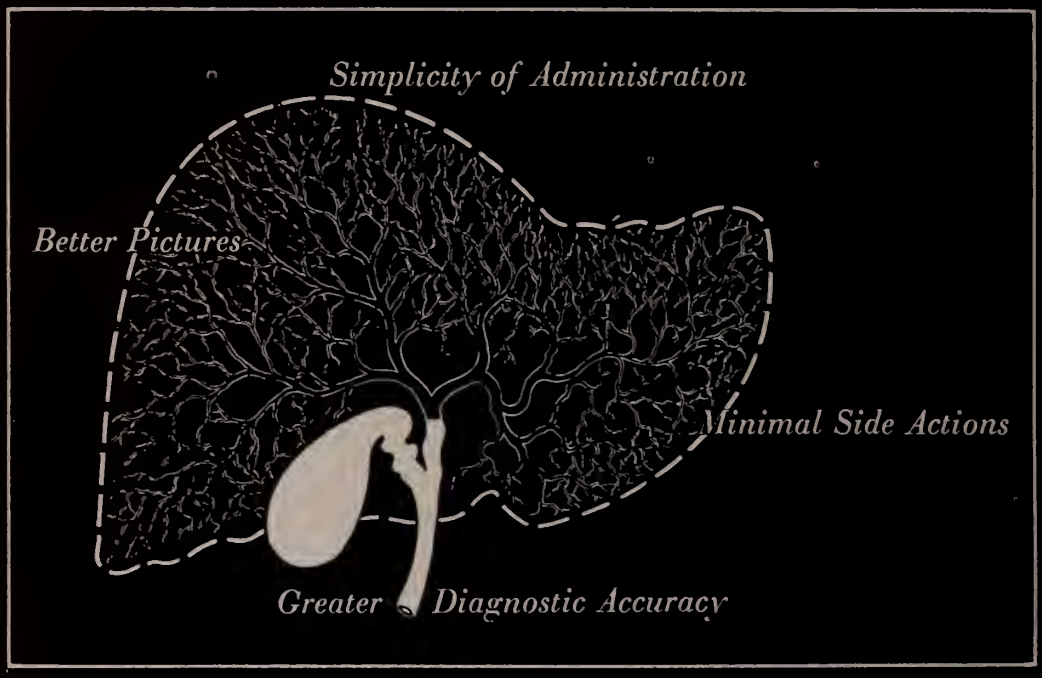
**Pablum, a palatable mixed cereal food, vitamin and mineral enriched, and cooked thoroughly and dried, consists of wheatmeal (farina), oatmeal, wheat embryo, cornmeal, powdered beef bone, sodium chloride, alfalfa leaf, brewers' yeast, and reduced iron. (The oatmeal form of Pablum is called Pabena.)**

[1-18] **Bibliography on request.**

**MEAD JOHNSON & CO., Evansville 21, Ind., U.S.A.**

# PRIODAX TABLETS

## A New Contrast Medium for Cholecystography




PRIODAX is not related to phenolphthalein; and because of its unique chemical composition it rarely produces vomiting. Excretion of most of the compound by the kidney reduces the possibility of diarrhea.

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EQUIPMENT BREAKDOWN
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INTERRUPTED SERVICE
LOSS OF TIME
INEFFICIENT OPERATION

X

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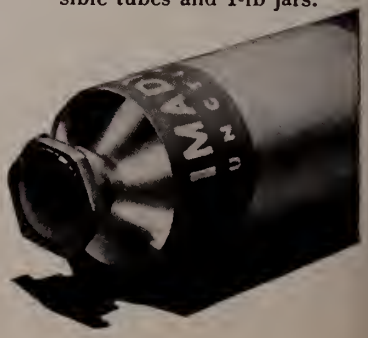
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*MILITARY POLICY*
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AMERICA'S ORIGINAL CREME FOR PLANNED PARENTHOOD

Prescribed For Over A Decade

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NEW YORK, N. Y.

ut so far I have learned of no other e suggestion which provides the neces- ety valve which such an arrangement would give. It would be tragic if a lot ll business concerns were wrecked and orkers thrown into idleness because of nability to cut through the red tape ed in getting their claims settled.

RESPONSIBILITIES OF CONTRACTORS

e making these statements with re- o action by the Federal authorities, I ize, also, that business concerns which war contracts have a responsibility on part to facilitate speedy settlement of ated war contracts. They have the re- bility for preparing their claims ac- y and speedily and presenting them per form. Some progress has been oward getting a recognition of the at industry must play in this respect, rrently more and more experience of ort is now being gained. The con- g services of the Government, I know, very helpful attitude toward this sit- , and the local office of W. P. B. has shed a regional advisory service for war faced with problems resulting from termination. That is a very helpful ent.

ation to make possible the prompt nt of terminated war contracts is now. It will be unsafe to wait until a deluge of contract terminations to hrough legislation on short notice. roblem is too complicated to be dealt ffectively in that way.

ATERIALS FOR CIVILIAN PRODUCTION

ddition to making provision for the ent of terminated war contracts, there the task of facilitating the flow of ials for civilian production as soon as materials can be spared from war pur- I hope that we shall not have unem- ent here in Massachusetts because d materials, which are physically in ex- e in the United States, are unavailable e by manufacturers as a result of leg- e or administrative restrictions. The legislation vesting the priority power President, which power of the Presi- delegated to the Chairman of the War ion Board, is probably adequate to the flow of materials. But it may be ry for the Congress to make sure that ministration of the priority power by ar Production Board is directed effec- toward the speedy and smooth resump- f civilian production. The War Pro- n Board should be expected to elim- s limitation orders, its conservation and its allocation systems just as s the needs of the war program per-

use of their effects on plans for re- yment, I foresee that these problems tling canceled contracts and securing pplies of raw materials for civilian pro- n will presently be matters of wide- concern here in Massachusetts.

ummarize, my specific recommenda- re that legislation should be enacted r the following points:

EMENT OF TERMINATED WAR CONTRACTS

terminated contracts should be set- egotiation by the contracting agen- the Government, and the negotiated nt should be final in the absence or misrepresentation.

mpt partial payments amounting to large percentage of the claim should d to each contractor upon submittal fied statement of the claim, subject, , to a penalty for perjury.

al settlement committees should be red to authorize partial payments delay of over 30 days occurs on the the Government agency.

4. Contracting agencies should be required to give prompt clearance of claims on work in process. There should be clear-cut procedures for authorizing the removal of Government-owned inventories and machines, with storage at Government expense, in order that civilian production may be started.

5. The dilemma of the subcontractors must be resolved. At the present time the Government exercises the right of approving all payments in settlement of subcontracts but does not assume any responsibility to the subcontractor, with the result that the subcontractor in many cases cannot secure action by either the prime contractor or the contracting agency. I suggest that the local settlement committees proposed above should be empowered to approve settlement of subcontracts if a delay occurs in approval by the contracting agency.

B. DECONTROL OF MATERIALS

1. As soon as war conditions permit, the rules for the release of certain raw materials should be revised, with a view to facilitating the rapid resumption of civilian production.

## A Magnificent Job

EXTENSION OF REMARKS
OF
**HON. LOUIS LUDLOW**
OF INDIANA

IN THE HOUSE OF REPRESENTATIVES

*Tuesday, January 11, 1944*

Mr. LUDLOW. Mr. Speaker, Indianapolis and Indiana are very proud of the great pharmaceutical house of Eli Lilly & Co., which has processed its millionth blood donation without a cent of profit. This record is in keeping with the fine, generous spirit which this firm always has manifested in the service of our country and which long ago brought to it the recognition of an Army-Navy E award. Commenting on the company's contribution to the blood campaign, which means so much in saving the lives of our precious boys, the Indianapolis News says editorially:

LILLY'S CONTRIBUTION

In the midst of charges that some concerns are making an unholy profit from war contracts it is heartening to learn that the Indianapolis laboratories of Eli Lilly & Co. have processed 1,000,000 blood donations entirely on a nonprofit basis.

In addition to performing this service at cost, the expense involved has been decreased constantly through the introduction of more efficient methods.

There certainly could have been nothing unethical if the Indianapolis pharmaceutical house had sought a minimum profit for the work it has been doing.

Donations of blood at Atlanta, Chicago, St. Louis, Detroit, Cincinnati, Louisville, Columbus and Indianapolis have been converted into live-saving plasma at the Lilly plant, involving the installation of new equipment and the employment of much additional skilled personnel.

The patriotic Americans who donated this blood, however, got nothing for their contributions and the Lilly Co. determined that its connection wiht the effort to strengthen the wounded on every fighting front should be entirely shorn of private gain. From beginning to end, it has been and is—a magnificent job.

## The Gates Must Not Be Closed

EXTENSION OF REMARKS
OF
**HON. SAMUEL DICKSTEIN**
OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

*Tuesday, January 11, 1944*

Mr. DICKSTEIN. Mr. Speaker, leave to extend my remarks in the ORD, I include the following editorial the Daily Mirror of January 4, 194

THE GATES MUST NOT BE CLOSE

When Congress reconvenes on Janu it should take up the Gillette-Taft-Bal Rogers resolution.

This resolution calls for the format a Presidential commission to create m ery, in conjunction with the Unite tions, to rescue the millions of Jew are now being systematically exterm by the Nazis and their Quislings.

When the Presidential commission g work, one of the first things it should to seek the abrogation of the Cham "White Paper" of May 1939

At present, Palestine is being admin by Great Britain in conformity with t licy embodied in the "White Paper," tue of which Jewish immigration int tine is now limited and is to be p topped after March 31, 1944. The to be reduced to a permanent min percent in the country and the and to Jews is to be practically pro

A DIRECT REPUDIATION

This is a direct repudiation on En part of the League of Nations Mande the Balfour Declaration incorporated mandate of 1917.

According to this declaration, Palest to become a national Jewish home un protectorate of England.

In 1939, after the Jews had created ern civilization in what was practic Arabian desert, England turned h on her solemn promise of 1917.

This perfidy of Britain toward t was denounced by no one more vig than by Winston Churchill in Parlian the debate on the "White Paper" when he said:

MR. CHURCHILL'S REGRET

"As one intimately and responsib cerned in the earlier stages of our P policy, I could not stand by and see engagements into which Britain has before the world set aside for reason ministrative convenience or for the quiet life. I should feel personally rassed in the most acute manner myself by silence or inaction to wha regard as an act of repudiation.

"I regret very much that the pledg Balfour Declaration, endorsed as it b by successive governments, and the tions under which we obtained the m have both been violated by the Gover proposal.

"I select one point upon which plainly a breach and repudiation of four Declaration—the provision tha immigration can be stopped in 5 ye by the decision of an Arab majority. a plain breach of a solemn obligation

As the Palestine Mandate was ord the League of Nations, it cannot b gated even by Great Britain herself the consent of the League.

A SOLEMN OBLIGATION

But the League did not give its con the 1939 abrogation.

March, 1944
VOL. 85, NO. 3

The Illinois Medical Journal

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Harry Culver, Walter Stevenson, Raymond W. McNealy.

# Editorials

## IT'S FINE TO HAVE FRIENDS!

In recent months many comments have appeared in the press throughout the country relative to the Wagner-Murray-Dingell Bill and other frequently mentioned plans to change the system of medical care in the United States. Many of these have been quite complimentary to the medical profession and the work that is being done by this group, especially in war time. Many of the reports have been relative to the outstanding work of the Medical Corps of our Armed Forces and the greatly improved statistics over those of the last war in the care of the many casualties.

On the other hand some of these reviews have severely criticized the medical profession for its strenuous objections to a bureaucratic controlled plan for medical care with the stereotyped statement that the majority of the American people are unable to procure adequate medical care when ill. It has been shown repeatedly that this statement is not true, and actually no more than 10% of the people of this country are in need of better care. In many instances a considerable number do not want the type of medical care which is actually available for them.

An editorial which appeared recently in the Berwyn (Illinois) News, entitled "Chronic Kickers — Not Liberals", has been called to our attention and we are reprinting it as it appeared in that paper:

## CHRONIC KICKERS NOT LIBERALS

Many who call themselves liberals have one outstanding trait. They are always kicking. The latest victim of this particular brand of liberalism has been the medical profession.

Doctors have struggled in laboratories and at bedsides for centuries to learn the secrets of keeping the human body alive and healthy. Dread diseases have been nearly eliminated. The span of life has been doubled in a few decades. Pain and suffering have been reduced miraculously. Since the war, the performance of the doctors has been supreme. They have carried their hard earned knowledge into the front lines with the result that hundreds of thousands of men will return to their families after this war, who would otherwise be rotting in foreign graves. The doctors at home are working night and day, literally without rest, to care for the sick and injured among the civilian population.

A lot of cockeyed schemers, whose blood pressure would have felled them long ago if a few competent physicians had not been at hand, are now telling the country that the medical men have got to do much better at once or Uncle Sam will step in and take care of our medical needs. But Uncle Sam never saw the inside of a medical school. After the shouting dies down it will still be up to the doctors to keep us healthy. Socialized medicine would do no more than make the government a bill collector for the doctors, payable in advance, with a large part of the money retained for bureaucratic activities.

Medical advancement will be achieved by the doctors in the future, as in the past.

It is most gratifying to members of the medical profession who have been carrying on at the home front, as well as those loyal physicians now

serving their country on the many battle fronts, to see tributes to the profession and its work published in a home paper.

The editor of this paper no doubt believes in having a family doctor, and is thoroughly satisfied with the type of medical care he and his family have received. Likewise it is quite obvious that he, and millions of others throughout the country, do not believe it wise to experiment in other plans which some believe will eventually be adopted and may provide superior medical service. As yet these are only untried experiments, and there is no actual experience available to prove their value and worth.

## A WELL DESERVED TRIBUTE

The Chicago Daily News, under date of January 31, 1944, published an interesting story of a meeting of George Weller, Daily News correspondent who had just returned from the Southwest Pacific, and the family of the late Major Lemuel E. Day who gave his life in the service of his country in the Buna campaign on New Guinea late in December, 1942. A picture of George Weller with Mrs. Day, the Day twins, Leonard and Giles, and the daughter of Major and Mrs. Day, Miss Mary Ann, appeared with the article.

After two years in the Southwest Pacific area, Mr. Weller came to Chicago for a short and well-deserved rest. He talked to friends and relatives of Chicago service men in that area on the subject, "Your Boy Against the Emperor's", having accepted at least three assignments for the talk in various parts of Chicago during his visit home.

In his discussion with the family of Major Day, Weller told of the unusual hardships endured by their distinguished husband and father, and of the air raids that had pursued the Major's hospital unit through the jungles, and how he had earned the Silver Star during one of these raids. Only the evening before his tragic death Weller said Major Day had turned out with the rest when the bombs began to fall and had aided


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in moving his patients from their hospital cots into slit trenches, then back again.

Mrs. Day showed Weller a letter received from the officers of the hospital in the Southwest Pacific only a few days previously, in which was told the story of a Memorial Service last New Year's Day held for Major Day, and attended by a group of 33 medical officers who had been associated with him, and who desired to pay homage to a remarkable personality — their former commander whom all had respected so highly. They described the service at which someone recited the Twenty-third Psalm, the Chaplain delivered an appropriate eulogy, and they all sang "Beautiful Isle of Somewhere", Major Day's favorite song.

Members of the Illinois State Medical Society and many others will recall the story of Major Day's passing as it appeared in the papers early in January, 1943, and from articles published in the Illinois Medical Journal at that time. George Weller's dramatic story on Major Day's death was one of the outstanding reports from New Guinea. It was also the first word the family had of his death because, for some unknown reason, there had been a delay in the family receiving the usual formal notification which was received a short time after Weller's story appeared in the Daily News.

The memory of "Lem" Day will long be revered by his many friends and colleagues for his outstanding accomplishments as a specialist in obstetrics and gynecology, for his work in the Chicago Medical Society, and as a member and Chairman of the Council of his State Medical Society over a period of years.

It is indeed a great tribute when a group of medical officers who have seen so much of death and suffering over a period of many months, gather together a year after the death of a colleague, to pay tribute to his memory. The archives of the Illinois State Medical Society are enriched through the addition to its many records of those pertaining to one of the Society's outstanding heroes, — one never to be forgotten — Major Lemuel E. Day.

## RESERVATIONS FOR THE 1944 ANNUAL MEETING

All physicians intending to be present at the annual meeting should make reservations at the Palmer House, where all meetings are to be held, or at one of the other near by hotels in Chicago. The date of the meeting is May 16, 17, 18, 1944. Chicago hotels are all crowded and reservations should be made well in advance to give assurance that a desirable room will be ready for members of this society, and others who expect to be present on this gala occasion.

In writing the hotel for a reservation, the time of the expected arrival should be mentioned, and also the type of accommodations which are to be desired; whether single or double room, and the approximate rate which is desired. The hotel personnel will give an immediate acknowledgement of the application and notification of the reservation.

DO NOT FAIL TO MAKE AN EARLY HOTEL RESERVATION FOR THE ANNUAL MEETING.

## TWO SOCIETY OFFICIALS DIE

We regret to announce the deaths on March 2nd of our President, Doctor George Washington Post and the Chairman of the Finance Committee of the Council, Doctor John S. Nagel. Additional details will appear in the April Journal.

## CALL FOR SCIENTIFIC EXHIBITS

The Committee on Scientific Exhibits of the Illinois State Medical Society announces that applications for exhibit space should be submitted promptly for consideration. Selections will be made as nearly as possible in order of receipt. Accordingly, it will aid the applicants and also the Committee if the applications are submitted early.

The Committee is particularly anxious to have exhibits which deal with the theme of this annual meeting, namely, "medicine and its relationship to war problems". This includes (1) the newer things that have arisen in civilian practice, teaching and research; (2) all activities which have to do with medicine in industry.

The exhibits this year promise considerable change over those of former years. The Committee wants information about potential exhibits.

Communications may be addressed to Dr. H. Close Hesseltine, care of Illinois State Medical Society, Room 1416, 30 North Michigan Avenue, Chicago 2, Illinois.

## PICTURES OF DOCTORS

Dr. Carl E. Black, of Jacksonville, Illinois, is highly pleased that there is one physician in Illinois who remembers the collection of photographs of our doctors.

Dr. Andy Hall, former Director of the Illinois Department of Public Health, has sent Dr. Black, for the collection of the Illinois State Medical Society, eleven photographs of physicians in the Hall family. These range all the way from Dr. Hall and his sons to more distant members of the Hall family. The names and residences of these members of Dr. Hall's family are as follows.

Dr. John McLean, Pullman, Illinois.
Andy Hall, M.D., Mt. Vernon, Ill.
Wilford F. Hall, M.D., McLeansboro, Ill.
W. W. Hall, M.D., McLeansboro, Ill.
Wilford F. Hall, M.D., Colonel, Army Medical Air Corps.
Marshall Wesley Hall, M.D., Mt. Vernon, Ill., U.S.N.
Andy Hall, Jr., M.D., St. Louis, Missouri.
Ralph Hall, D.D.S., McLeansboro, Ill.
Charles Wesley Hall, M.D., Mt. Vernon, Ill.
John Carl Hall, M.D., Centralia, Ill.
Frank W. Hall, M.D., Portland, Oregon.

They constitute a wonderful contribution to our collection for which Dr. Black, our official collector, is grateful. There is a short biographical note on the back of each of Dr. Hall's pictures.

While Dr. Black realizes that this is not a good time to secure additional pictures he suspects that the trouble is more deep seated. Following the example of the American Medical Association, many of our local societies are not meeting, or are meeting irregularly. Letters sent to the officers of these societies are not answered except in a few cases. Dr. Black has urged all of the societies to appoint a committee for the collection of photographs of members and biographical and historical materiel. These committees should be appointed and get to work. One or two societies are attempting to secure pictures of all of their members. As far as we know most of the societies are not giving this important matter attention and will be much disappointed in the future not to have their society adequately represented in our collection which now comprises nearly fourteen hundred Illinois physicians and a total of three to four thousand from all parts of the world. This collection will be housed by the Illinois State Medical Society with the Illinois State Historical Society in the Centennial Building in Springfield, where it will be in a fire-proof building and will have expert care.

We urge every member to help out in this matter. See that your society has an active working committee to help Dr. Black out in this worthy cause.

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## LIBERTY SHIP NAMED FOR NATHAN SMITH DAVIS

As a salute to the contribution of the American medical profession to the war, a war-cargo ship — a so-called liberty ship — was launched Thursday, January 27, at Shipyard No. 2 of the Permanente Metals Corporation of Richmond, Calif., one of the Henry Kaiser interests. The vessel was christened the *Nathan S. Davis* in honor of the founder of the American Medical Association. In 1947 the American Medical Association will celebrate the 100th anniversary of its founding. The Board of Trustees of the Association has under consideration the celebration of this important event in a suitable manner. The dedication of this vessel in honor of Nathan Smith Davis and another in honor of Frederick Banting may be taken as indications of the appreciation of the American people of the great contribution that medicine has made not only to the war but also to the standards of health and medical education in the United States.—*From J. A. M. A., Feb.* 5, 1943.

# Correspondence

## A MESSAGE TO THE AUXILIARY

Do many of us understand the duties and responsibilities of being a member of the Auxiliary? Or do most of us just happen to be members because we are physicians' wives? It is rather interesting to be a member, if we understand the necessity of having an Auxiliary.

Let us think of the aims and objectives of the Auxiliary:

1. To assist the Illinois State Medical Society in the advancement of the prevention of disease.
2. To aid in securing better legislation indicated in the pursuance of these ends.
3. To do such supplemental work as shall be determined from time to time by the medical society in the advancement of professional interests.
4. To contribute to the Medical Benevolence Fund.

The present war has developed new opportunities for the Auxiliary, and we should take advantage of every opportunity to further the aims of the medical profession, and the Auxiliary, through the defense measures in our community. We, as physicians' wives, could be the leaders in war efforts such as promoting health programs, nutrition classes, First Aid, Home Nursing, help with the promotion and sale of United States War Bonds, stamps, etc. It has been suggested by our National Auxiliary that we assist with the recruitment of nurses and the new Nurses Cadet program. All of this comes under our War Participation Program, of which Mrs. Theodore Johnston, Chicago, is State Chairman.

The medical profession of this country is greatly concerned about the Wagner-Murray Senate Bill, 1161. The American Medical Association has advised its members to obtain copies of the bill, to familiarize themselves with its provisions. This every Auxiliary member should do also. All Auxiliary members should be well informed on any proposed legislation that would affect vitally the standards of medical practice. If this bill is passed in its present form, it will destroy the private practice of medicine in the United States. Our State Legislation Chairman, Mrs. J. P. Simonds, Chicago, in her efficient way, has notified the Auxiliary members how to write to their Congressman to oppose this bill.

The Illinois Medical Society believes that one of the most important projects of the Auxiliary is to procure funds for medical benevolence. This should be one of our first contributions, and we would like to have the wives of all physicians help us in this great work. There have been more benefits from this fund paid to women than to physicians, these being widows of former members of the Illinois State Medical Society. To date, a large sum has been used in the payment of benefits to twenty or more beneficiaries. The Illinois State Medical Society hopes that a considerable amount of money can be added to this fund by the Auxiliary, and feels that there is nothing that we can do which will react to our credit more favorably.

Let us consider some means of raising money for the medical benevolence. We now have a State Chairman for Medical Benevolence, who is Mrs. Nathaniel Baskind, Chicago, and we hope through her efforts that we can create new interest in this objective.

The 1944 Annual Convention of the Auxiliary to the Illinois State Medical Society will be held at the Palmer House, Chicago, on May 16-17, 1944. Mrs. Frederick Tice, 440 Linden Avenue, Oak Park, Illinois, has been selected Chairman

of the Convention. She is most anxious to do everything possible to make the 1944 annual meeting a successful one. Her committee will be announced at an early date.

In spite of the shadows that have fallen, the sacrifices that have been made and those that lie ahead, we look forward to victory. The most satisfying wish is for an early victory, and the opportunity of all those in the service to reunite with their loved ones, and may this peace be a peace with honor and justice and liberty.

With best wishes for the success of our Auxiliary and greater progress in the work which we are endeavoring to do.

Your State President,
Louise M. Nix
(Mrs. M. A. Nix)

President of the Auxiliary to the Illinois State Medical Society

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## MEDICAL TREATMENT OF SOLDIERS ON FURLOUGH

The Editor
Dear Sir:

Soldiers on furlough or otherwise absent from their organizations are requiring medical treatment in large numbers. There is considerable misunderstanding and confusion among civilian agencies regarding the responsibility of the government in these cases, and a mimeographed letter setting forth the principal requirements has been mailed to civilian hospitals throughout your state. In order to acquaint physicians as to the proper procedure to follow in handling such cases, it is requested that the inclosed circular letter be given publication in your State Journal.

Very truly yours,
Don G. Hilldrup
Colonel, M. C. Surgeon

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Army Service Forces
Headquarters Sixth Service Command
Chicago 6, Illinois

February 11, 1944

Subject: Medical Treatment, U. S. Army Personnel.

To: Civilian Hospitals, Sixth Service Command.

1. All military personnel are entitled to necessary medical care at Government expense providing they are not absent from their organizations and stations *without permission.* Medical care in civilian institutions and/or by civilian physicians must be limited to emergency conditions.

2. Fees to physicians and hospitals cannot be allowed if Government facilities for the care and treatment are available within reasonable distance. Fees for elective medical care will not be authorized.

3. If treatment to military personnel is given by civilian agencies, *immediate* notification of the facts and circumstances should be made to the Commanding General, Sixth Service Command, 20 North Wacker Drive, Chicago 6, Illinois.

4. Private accommodation in civilian hospitals will not be authorized except upon approval of this headquarters.

5. Fees for tissue microscopy are not allowable.

6. Itemized statement of services rendered should be forwarded to this headquarters for vouchering and payment immediately on termination of the service.

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"This war is going to alter radically the lives of every one of us. It not only will alter our lives during the immediate years after the war, but it will alter the life on this planet throughout our lives and the lives of our children. And whether it is going to be the kind of a life in its influences and in its developments that we want it to be, and is going to be the kind of a life that will give us the most satisfaction in having lived, is going to be dependent on how we utilize these years that are right here now — on our understanding of what are the necessities of a post-war world."—Dr. Ernest Martin Hopkins, President, Dartmouth College.

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In the swiftly changing world of today many roads are open but the one marked status quo is closed. If the medical profession does not choose where it will go, less competent powers will choose for it.—Journal Kansas Medical Society, March, 1943.

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A new name is herewith presented medical men for the dazed mental condition of citizens who have just made out their income tax. They are intaxicated.—Washington Evening Star.

# Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

The political, social and economic problems are gathering momentum at home and abroad. The four freedoms are apparently scrambled so thoroughly that it seems quite impossible to unscramble them.

Congress has clenched its fists and stuck out its chin and asserted itself for constitutional government in the last few weeks. The members of the Supreme Court appear to be in a fighting mood, particularly among themselves, and it is quite apparent that all of the New Deal members of the Supreme Court do not see eye to eye at the present time. The Vice-President appears to be working with the CIO in a political hook-up by which they hope to control through labor the coming elections. Momentous times are ahead of us apparently both at home and on the war fronts.

Black markets in oil, food and transportation seem to be flourishing if the reports appearing in the press are at all accurate.

All deferments in the draft are supposed to be reclassified to meet the needs of our army. It is hoped that this reclassification will take in the District of Columbia, where again according to reports there are nearly 200,000 men in the draft age that have been deferred as essentials.

The cost of living keeps on going up and the strikes appear regularly apparently with the idea that labor is entitled to more pay as the cost of living goes up. We attempt to fight rising costs by subsidies, then tax the people to pay the subsidies as though the tax is not a cost in itself.

If we oppose increased taxes we are apt to be accused of being greedy; if we suggest government reduction in expenses we are apt to be classified as both greedy and as isolationists. It almost seems that we should ask no questions regarding the affairs of our government.

A few months ago or perhaps a couple of years ago many articles appeared in various publications questioning the American people — why they were so slow in recognizing and knowing what we were fighting for. Perhaps they should revive their thoughts at the present time and express their opinions based upon present home and world situations.

We are sure of one thing — we will continue to fight until the Axis are licked, and beyond that we will hope and pray we will not have to do it again and again.

R. K. Packard, M. D.
Chairman

March 2, 1944

Committee on Medical Economics

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## THE EMERGENCY MATERNITY AND INFANT CARE PROGRAM

Payment for care of wives and infants of enlisted men in the armed forces is provided by funds appropriated for this purpose by Congress, and under rules and regulations established by the United States Children's Bureau. The administration of this program is delegated to the Maternal and Child Hygiene Division of the Health Department of each participating State. The program in Illinois has been affected by

guidance from a technical advisory committee selected from members of the State Medical Society and has been approved by the Council of the Illinois Medical Society. The authorizing agency is the Division of Maternal and Child Hygiene of the Illinois Department of Public Health at Springfield. Chairmen of the Illinois Maternal Welfare Committee have been given information about the details of the program, and are in a position to advise with local societies and physicians; likewise, full time local health officers can be consulted.

*Eligibility* — Under the present rules and regulations of the Emergency Maternity and Infant Care program payment may be authorized for (1) complete medical care (obstetric, and including medical or surgical treatment of intercurrent conditions) of a pregnant or recently delivered wife of a man in the 4th to 7th pay grades, and (2) pediatric medical or surgical care of an infant under one year of age of an enlisted man in the same pay grades.

Eligibility for care of the pregnant wife or the infant is determined by rank of the husband (or father) and is not based upon financial need or upon place of legal residence. Since Congress specified that the funds are a grant to these dependents of service men, no investigation is made by any social agency, but the participation of a case in the program may be determined by (1) the patient's willingness to accept ward hospital care as provided, (2) the physicians' election to give care under the program or at the rates payable, and (3) the hospital's acceptance of these cases. Place of residence is of importance only in so far as application be made to the authorizing agency in the state in which care is given. In border regions of the state wherein medical care is to be given by a physician of Illinois and hospital care provided in a hospital of another state, or vice versa, appropriate application should be made simultaneously to each state. It is, however, the practice in receiving applications presenting these across-the-border problems, to authorize payment to the Illinois physician or the Illinois hospital and then to refer the request to the appropriate out-of-state agency for authorization of the out-of-state service. The doctor and the patient are advised of steps necessary to complete the authorization.

If, subsequent to the issuance of an authorization for any type of care, the husband or father is promoted or discharged from the service, the authorization is not affected by the alteration in the status of the service man.

*Time of Application.* — Application should be made at the time of the first visit of the pregnant woman to the physician of her choice or, in an emergency, or a pediatric case, as soon as possible. Although, at the present time, the authorizing agency is permitted, in the case of late applications, to make authorizations retroactive to a period of six weeks prior to date of receipt of an application in the Springfield office, it is the advisable procedure to make application immediately because retroactive authorizations are issued only after the filling out of additional forms which require an explanation for the delay in applying and statements of how much care was given and whether or not any payments were made to the physician or hospital. So, to avoid this complication, the application should be filed as soon as possible.

If the practitioner is licensed in Illinois, and the designated hospital licensed for maternity, payment for the care requested on the completed application is authorized. The authorization, specifying type of care authorized and funds encumbered for this service, should reach the physician and the hospital and notification thereof should be in the hands of the patient within a few days after receipt of the application in the Springfield office.

The customary procedure is to authorize ten days hospitalization for routine maternity cases in anticipation of an uncomplicated delivery. Extension beyond this 10 day period will be granted upon request. For other types of hospital care for the wife or the infant the length of hospitalization to be authorized is determined by the length of stay as estimated by the doctor. The rate of payment to the hospital is at the cost of ward care per patient day. Additional hospital care for an already authorized case may be obtained by a request for extension of hospital care, the physician or hospital superintendent notifying the Division of Maternal and Child Hygiene, of the nature of the condition requiring additional hospital stay, and an estimate of the length thereof. A new application need not be filed if the patient has made application previously for care during the pregnancy or the child has been authorized for care during the specific illness. No application need be filed for

a premature or sick infant remaining in the hospital after its mother goes home; but a report by letter, phone, or wire (collect to Springfield) should be made as soon as it is learned that extended care will be necessary. The request should specify weight of the premature or diagnosis on the sick infant and an estimation of the length of stay. If, however, a second illness develops during the first year of the life of the child, another application must be filed.

In cases requiring consultation (for either wife or child) fees are allowable for bedside consultation, consultation and assistance, minor surgery, and major surgery. The consultant should make application as soon as possible on the formal application blank, a supply of which is available at the business office of each participating hospital. This requisition should give the status of the patient necessitating consultation and specify the type of consultant service rendered or to be rendered. This application, as any other, should be filled in as soon as possible and sent to Springfield immediately.

For various reasons it occasionally becomes necessary for a doctor other than the one originally authorized, to give the services. The second physician may secure authorization for payment if a formal application is filed by him. Payment will be made to each physician for the care given by each.

*Payment.* — Payment is made when the attending physician, a consultant, or hospital submits the report on the care given the case together with four copies of the bill. On the fee schedule given below it will be noted that there is a $50.00 overall fee for complete maternity care in an uncomplicated case. In order to obtain the entire $50.00 fee the report must show that the following were given after the date of authorization: — seven or more antepartum visits, delivery care, and postpartum care, and the postpartum checkup at about six weeks. If the patient is to have a postpartum checkup, it would be the procedure of choice to delay sending in the report of maternity care and the statement in quadruplicate, until this last office visit had been made.

Beside nursing care at home or in the hospital, as requested by the physician, may be authorized for the mother or infant as a special service during a serious illness or for home delivery.

Since the basic principles of the Illinois plan follow very closely the presentation in the J.A.M.A. of January 22, 1944, the reader is referred to that issue for a fuller discussion of this program. (J.A.M.A. Vol.: 124, No. 4, P. 241, Jan. 22, 1944.)

The fee schedule of the EMIC plan in Illinois, effective on authorizations issued on or after February 1, 1944, is outlined below:

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ILLINOIS EMERGENCY MATERNAL AND INFANT CARE PROGRAM — MEDICAL FEE SCHEDULE

(Applies only to Authorizations Issued Feb. 1, 1944 or Later)

Payable Only for Services Given after Effective date of Authorization — See Reverse

PAYABLE TO ATTENDING PHYSICIANS

FOR THE WIFE

1. *Complete Maternity Care*—i.e. from effective date of authorization through the six weeks postpartum period. This includes all care given (1) the pregnant wife by the doctor (7 or more visits before delivery, delivery, postpartum care and 6 wks. postpartum exam.) (2) the infant during the first 2 wks. of life. Office visits for complications, attributable or not to pregnancy, count as antepartum visits (for home or hospital care see 3 below) .... $50.00
   For care less than above, the $50.00 fee is prorated: —
   a) *Antepartum Care* — If 7 or more visits given ..... 15.00
      If less than 7, $3.00 for first visit, $2.00 each additional.
   b) *Delivery* and care to 6 weeks postpartum ..... 30.00
   c) *Postpartum examination* at end of six weeks ..... 3.00
2. *Care Beyond 6 Weeks Postpartum (home or Hospital: not office)*
   a) 1st week, if 4 or more visits made (if less than 4, $3.00 per visit) ..... 12.00
   b) Each added week if 3 or more visits made (less than 3, $2.00 per visit) .... 6.00
3. *Medical Care (Home or Hospital: not office)* if intercurrent nonobstetric conditions not requiring major surgery ..... Same as "2" above.
4. *Spontaneous Abortion without Surgery* (add antepartum visits) ..... 15.00
5. *Abortion with Surgery,* & pre- & post operative care ..... 35.00
6. *Ectopic Pregnancy,* surgery, pre- and post-operative care ..... ..... 50.00

FOR INFANTS UNDER 1 YEAR

1. *Medical Care,* Including Minor Surgery (Home, Hospital or Office) 1st week, 4 or more visits (less than 4, $3.00 per visit) .... 12.00
   Each added week of 3 or more visits (if less than 3, $2.00 per visit) ..... 6.00

2. *Immunizations*
   a) Smallpox; successful ..... 1.00
   b) Diphtheria; two or more "shots" (nothing for one) ..... 2.00
   c) Whooping cough; (not less than 3 procedures) plus cost of vaccine when not available from the State ..... 3.00

PAYABLE TO DESIGNATED CONSULTANT* ONLY FOR EITHER WIFE OR INFANT

1. Bedside consultation — per consultation .... 10.00
2. Consultation including service as assistant ... 10.00
3. Minor surgery, (including pre- and post-operative care) ..... 10.00
4. Major surgery (with consultation, pre- and post-operative care) ..... 50.00
   a) On infants** (exclusive of care available under State Crippled Children's Program).
   b) On wife (during pregnancy and six weeks postpartum)
      1. Obstetric surgery.
      2. Non-obstetric surgery**.

PAYABLE TO ATTENDING PHYSICIAN OR CONSULTANT

1. *Telephone* consultation (long distance) .... .....(Actual cost of call.)
2. *Travel*: for travel time and cost while attending seriously ill patient, or home delivery outside city limits of doctor's residence — per mile each way ..... .25
   (Maximum payment for travel per case $25.00)

* Until list is available, choice of attending physician will be authorized.

**Payable to a consultant who may also be attending physician.

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The stomach is a slave that must accept everything that is given to it, but which avenges wrongs as slyly as does the slave.—Emile Souvestre.

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Tuberculosis is by far the most important public health problem in Alaska. At least two factors now stand in the way of an effective program for its control; the lack of anything even approaching adequate hospital facilities, and the failure of the white population to understand the seriousness to them of the great numbers of cases among the natives.

Methods of finding and reporting cases are very poor and there is an astonishingly large number of deaths that occur without any medical attendance so that the cause of death is given as "unknown". The figures for tuberculosis deaths are admittedly incomplete for these reasons. Even so they represent death rates for whites of 48 per 100,000. The rate for the United States among white persons in 1940 was 37 per 100,000. The native death rate of 728 is nearly 15 times the rate for the United States. Carl E. Buck, Dr. P.H. and G. Hays, M.D. Alaska's Health, Dec. 1943.

## DOCTORS AND NURSES IN CHINA GROW PLANTS FOR NEEDED DRUGS

Doctors and nurses in China's vast northwest territory, surrounded on three sides by Japanese armies, have been forced by necessity to become farmers.

Because of a crucial shortage of drugs such as belladonna, digitalis, codeine, and morphine, Chinese physicians and surgeons looking after ill and wounded guerrilla soldiers are now attempting to cultivate plants producing the drugs. China Aid Council, a participating agency of United China Relief, announces that Mme. Sun Yat-sen, who sponsors medical aid to guerrilla fighters and their children in the northwest, has cabled an urgent appeal for information on the cultivation of the purple foxglove, whose leaves provide digitalis, and on the cultivation of the deadly nightshade plant, whose leaves produce belladonna.

Mme. Sun, who is the widow of the founder of the Chinese Republic, writes that codeine and morphine, so necessary on the battlefront, are now being extracted in small quantities from opium.

Blockaded on three sides by Japanese armies, this northwest area had not received outside medical aid for two years until recently, when several truckloads of medical supplies were sent through from Free China. In the past five and a half years, medical treatment of the thousands of Chinese guerrilla soldiers was made possible almost entirely by drugs and medicines captured from the Japanese or smuggled out from Peiping, and by the small quantities of drugs and serums manufactured in the local drug factory.

Mme. Sun writes that thosuands of guerrilla soldiers have died, and many more have suffered unnecessarily for want of medicines in the northwest region, where fighting has been constant since Japan started her invasion in 1937. The death last December of Dr. Kotnis, a young doctor from India, director of the International Peace Hospital in Wutaishan, is said to have resulted from inadequate medical treatment due to drug shortage.

His predecessor, the Canadian, Dr. Norman Bethune, founder of the International Peace Hospitals, died in 1939 as a result of lack of drugs needed to treat an infection.

A drug factory and serum institute, aided by funds sent by China Aid Council of United China Relief, are now producing medicines made from local herbs and indigenous materials. Mme. Sun also writes that the low grade vaseline obtained from local oil fields is being improved upon by Chinese research chemists working in the drug factory.—*Connecticut State M. J.*

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"These are the times that try men's souls; the Summer Soldier and the Sunshine Patriot will, in this crisis, shrink from the service of his country, but he that stands it now deserves the love and thanks of Man and Woman."—Thomas Paine.

# Medicine's Role in the War Effort

## ARMY TO TURN OVER CERTAIN CAMPS TO VETERANS' BUREAU FOR HOSPITALS

The War Department announced recently that certain army camps which have been vacated by troops sent overseas will be turned over to the Veterans' Bureau for use as Veterans' hospitals. This decision was made at a meeting called by Lieut. Gen. Brehon Somervell, commanding general, Army Service Forces, in his office and attended by Brig. Gen. Frank T. Hines, chief of the Veterans' Administration, and Major Gen. Norman T. Kirk, Surgeon General of the Army. In announcing this transfer, General Somervell said that "the War Department is determined to see that every discharged, wounded or sick veteran gets the best possible care and that this care is uninterrupted. Anything less is unthinkable. Not a single veteran of the present war should be discharged until he is entirely recovered or until the Veterans' Administration has a bed for him. The number of beds in army hospitals is of necessity limited. Adequate preparation must be made to receive wounded men from overseas for immediate treatment. General Hines desires to assume responsibility for each veteran at the earliest possible minute. We are in complete agreement on the obligation of the government to the sick or wounded soldier. However, the Veterans' Administration has been hampered by lack of facilities and of trained staffs. Therefore we offered to turn over as many camps as General Hines needs to assure uninterrupted care and comfort for our men. He accepted our offer and we now are working out details together."

General Somervell announced at the same time that, in order to prevent doctors assigned to Veterans' hospitals from resigning to join the army, all such doctors who can pass physical examinations will be commissioned in the Army Medical Corps and reassigned to the Veterans' hospitals to assist General Hines in meeting the existing acute situation in regard to all types of personnel. Which military establishments will be transferred has not yet been decided, but the War Department and Veterans' Bureau officials hope to make their decision shortly and begin preparations to receive patients as rapidly as possible.

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## CAPT. EDGAR O. HUGHES AWARDED SOLDIER'S MEDAL

Capt. Edgar O. Hughes, formerly of Washington, Ill., was awarded the Soldier's Medal for "heroism on July 5, 1943. Fifteen freight cars loaded with gasoline, bombs and other military equipment were on a railroad siding near a station. Gasoline which was being transferred to two trailers suddenly ignited, causing a tremendous explosion. Rushing to the fire, Captain Hughes and others helped combat the flames in an effort to check the possibilities of further explosions and damage. He assisted in uncoupling the eighth and ninth cars and, using the cab of the gasoline trailer as a locomotive, Captain Hughes and his companions brought eight freight cars to safety. While they were attempting to repeat the process with respect to other cars near the burning gasoline some of the bombs exploded, the concussion knocking the men to the ground. Although suffering shock and abrasions, they continued their attempts to halt the spreading flames, which had now reached the nearby dry fields. Soon after, they were removed from the scene by superior command and given medical treatment. By his unfailing devotion to duty

and outstanding courage, Captain Hughes was greatly responsible for saving from complete destruction vast quantities of military equipment. His clear thinking and unusual initiative have reflected great credit upon himself and have upheld the highest traditions of the military service of the United States."

Dr. Hughes graduated from the University of Illinois College of Medicine in 1941 and entered the service Feb. 26, 1942.

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## PRISONER OF WAR

Word was recently received from Major Willard H. Waterous of Manila that he is being held a prisoner of war in Military Prison Camp No. 3, Manila, P. I., and that since the fall of Bataan and Corregidor he has been taking care of military prisoners of war. Dr. Waterous made his home in Manila for nearly twenty-five years. He joined the army when war was declared, underwent the bombardment of Manila on Dec. 27, 1941 and when the city was occupied by the Japanese on Jan. 2, 1942 retreated with General MacArthur's forces to Bataan Peninsula, which withstood terrific attacks before falling, April 9, 1942. Dr. Waterous graduated from Northwestern University School of Medicine, Chicago, in 1916, his former home being Galva, Ill.

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## AVIATION MEDICAL EXAMINERS

Graduating exercises were held at the School of Aviation Medicine, Randolph Field, Texas, on January 6 following completion of the course for aviation medical examiners. The list of Illinois medical corps students graduating follows:—

William L. DeRenne, Captain, Chicago.
Harold Feldman, Captain, Pekin.
Roy R. Grinker, Lieut. Col., Chicago.
Weston W. Jones, Captain, Evanston.
Edward W. Kallal, Captain, Chicago.
Philip H. Ross, Captain, Chicago.
Leland M. Stilwell, Captain, Champaign.

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## ARMY SILVER STAR GIVEN TO NAVY DOCTOR

Lieut. James F. Regan, commanding officer of a navy medical detachment serving with a marine raider battalion, was recently presented with the Army Silver Star for gallantry in action on New Georgia, Solomon Islands, during the operations against the enemy there last July. The citation accompanying the award read in part as follows: "Dr. Regan directed the activities in the care of and aided the evacuation of over 200 casualties, including 72 litter (stretcher) cases, in areas covered by enemy small arms, machine gun and mortar fire during the period from July 8 to July 21." Dr. Regan graduated from the University of Chicago Department of Medicine in 1934, and entered the service in July 1942.

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## RESIDENT AND INTERN QUOTAS FOR HOSPITALS, 1944-1945

The Procurement and Assignment Service is now setting quotas for hospital intern and resident staffs for 1944-1945. Any hospital which has had significant changes in patient load during the past year is urged to submit immediately to the Procurement and Assignment Service Central Office a report covering average daily census, births, inpatient admissions, exclusive of births, and outpatient visits for 1943. No questionnaire is being sent to hospitals for this purpose. However, it is in the interest of the hospital to send in such data, since it will be considered by the hospital subcommittee charged with setting quotas.

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## ROYAL ARMY AIR CORPS OFFICER FIRST TO USE PENICILLIN

Lieut. Col. Ian Fraser, Royal Army Medical Corps officer, who was the first one to use penicillin in the front line, has been awarded the D. S. O. for doing so under heavy enemy fire on the Sicilian beaches. The citation recorded that he used technic novel to war surgery and "established new and most valuable wound treatment." For forty-eight hours he remained ashore under shellfire and divebombing and then, before returning to his hospital ship, gave a pint of his blood to save the life of a gravely wounded man.

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## GOLD WINGED BADGE FOR ARMY AIR FORCES FLIGHT NURSES

The War Department announced on January 18 the adoption of a gold winged badge for flight nurses of the Army Air Forces which is similar to the flight surgeon's wings except that it is smaller and consists of the combat observer's badge with the insigne of the Army Nurse Corps superimposed in the center. These wings have been authorized for wear by nurse graduates of the School of Air Evacuation, Bowman Field,

Ky., who have been assigned to flight duty. Five hundred have graduated since the flight nurses' training program was begun a little more than a year ago. Flight nurses now are serving with Army Air Forces' air evacuation units in all major combat zones, as well as with units assigned to global air transport routes. They take care of the wounded, sick and injured soldiers being evacuated aboard transport and cargo planes.

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## CHOICE OF STUDENTS BY DEANS OF MEDICAL SCHOOLS

The Directing Board of the Procurement and Assignment Service urges that if at all possible the 20 per cent of places not covered by Army and Navy contracts in classes entering medical schools after Jan. 1, 1945 be filled with students who on graduation will not be obligated for military service: that is, with women and men physically disqualified. This is the only group that can be depended on to serve as replacements for physicians in civilian practice.

Only in case a school does not have a sufficient number of acceptable applicants in this category to fill these places should the number of Army and Navy students accepted exceed 80 per cent. It is urged also that decision to accept more than 80 per cent of students from the armed forces be postponed until the latest possible date.

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## IMPLICATIONS OF WAIVERS FOR KNOWN PHYSICAL DEFECTS

The Office of the Judge Advocate General of the Army recently gave his opinion concerning the implications of waivers for known physical defects which physicians sign on being appointed for limited service in the Army Medical Corps. The opinion, which was released by the Procurement and Assignment Service of the War Manpower Commission, is as follows:

"Response is made to your oral inquiry whether acknowledgment, on the accompanying form, of existing physical defects would preclude a person from thereafter claiming benefits to which he would otherwise be entitled on account of the service connected aggravation of such defects. As to the defects acknowledged, the execution of such an instrument merely provides additional evidence of their existence and to that extent would operate to preclude the person involved from thereafter claiming benefits on account of them. It is the opinion of this office, however, that the mentioned form does not purport to be a waiver of possible future benefits to which the individual might become entitled by reason of any service connected aggravation of such defects and would not operate to deprive the individual of any possible benefits on account of such aggravation."

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## PROCUREMENT OF NURSES FOR MILITARY SERVICES

On January 8 the War Department officially notified the Directing Board of Procurement and Assignment Service that appointments to the Army Nurse Corps will be curtailed after 3,500 nurses needed early in 1944 have been procured. Thereafter only replacements will be needed. The Navy still needs nurses at the previously established rate of 500 nurses per month, but military needs may change rapidly with the course of the war. If such change occurs, the state committees will be advised at once.

Quotas soon to be released will place the major burden of procurement of nurses for military duty on those states which have supplied less than their share of nurses. But all state and local committees, as quotas are met, should direct activities more toward civilian needs for essential nursing services. A program for such activities will be released shortly; meanwhile, organization of additional local committees needed should be expedited and all efforts should be made to strengthen existing committees for the important and continuous task ahead.

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The administration of the tuberculin test to children of all ages has been found of great value. Whenever a child reacts characteristically to tuberculin there can be no doubt that he has had direct or indirect contact with a case of contagious tuberculosis, and a search for such cases among reacting children's adult associates is always profitable if carefully done, even if all sources are not found in this manner. Every child who reacts to tuberculin should have routine annual examination when adulthood is reached. J. A. Myers, M.D., Jour. A.M.A., Mar 20, 1943.

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## UP TO HIM

Selectee: "They can't make me fight."

Draft Board Chairman: "Maybe not, but they can take you where the fighting is, and you can use your own judgment."

# Original Articles

## CARDIOVASCULAR ROUND TABLE

FRANCIS D. MURPHY, M. D., MILWAUKEE, WIS.;
HERMON H. COLE, M.D., SPRINGFIELD,
AND
EDGAR M. STEVENSON, M.D., BLOOMINGTON

Dr. Chauncey Maher: The first question I have, Dr. Murphy, is: *What heart lesions contraindicate pregnancy?"*

Dr. Murphy: Dr. Cole would like to take that one.

Dr. Cole: The answer to this question as to what lesions contraindicate pregnancy must be narrowed before it can be answered intelligently. In most instances the lesion in question in a pregnancy is rheumatic. Coronary disease, arteriosclerosis, congenital, and syphillitic lesions are rare. I should say the most dangerous lesion from a rheumatic standpoint, aside from acute rheumatic fever itself which is always a contraindication to pregnancy, would be the lesion of the aortic valve. Mitral lesions usually do not give much trouble. The most serious danger in pregnancy is that a perfectly quiet rheumatic lesion may become active during the course of the pregnancy. Mitral stenosis, the typical rheumatic lesion, if well advanced, is a contraindication and where there are symptoms and sufficient evidence of previous congestive failure, one is justified in interrupting such a patient.

I believe that one should rarely consider a second interruption but in a primipara I think an interruption is justified. I believe, also, that all mitral and aortic combined lesions and all aortic lesions justify interruption. In older multipara where the question of a coronary lesion arises or where coronary occlusion has taken place, I feel that we are always justified in interfering as I seriously doubt whether any woman with coronary disease could carry through without serious trouble.

Dr. Murphy: I feel that Dr. Cole has answered about the way I would. I think that mitral stenosis is a disease that really does make pregnancy a dangerous situation, yet it depends on the heart muscle, it depends on whether the heart muscle is adequate, whether there is myocardial damage along with it.

We will take the next question: *"How long should a child with active rheumatic fever remain at bed rest?"*

I will ask Dr. Stevenson to take that one.

Dr. Stevenson: Dr. Murphy, Ladies and Gentlemen: I think we could best answer that question by a single word: individualization. Yet, I realize this is not an adequate answer. It has been said by good men a minimum of three months is advisable, and yet I have seen and I know all of you have seen children with active rheumatic disease who were not quiescent at the end of three months. The white count, the differential, particularly the sedimentation rate should be somewhat of a guide.

We are dealing, in this kind of problem, not with a single entity but with a disease and a complication. It is dependent, it seems to me, on the individual ability to combat the primary invader, rheumatic infection itself, and to determine clinically and by such means as we have at our disposal the extent of damage done.

Presented before the Section on Medicine, Illinois State Medical Society, 103rd Annual Meeting, Chicago, May 19, 1943.

About two weeks ago I had the privilege of hearing a noted cardiologist say he keeps all of his acute rheumatics in bed for one year. We had the experience at the Illinois Soldiers and Sailors' Children's School at Normal, where there is a census of about 750 children out of which number we found 280 with rheumatic type heart disease proven clinically and by investigative measures, and we felt four months was a minimum. We let some of them out at the end of that time who had normal sedimentation rates and normal counts. They had been up and around the wards with very little endocardial activity, certainly no evidence of failure, and at the end of five and six months we began to get some of them back with recurrences.

We know rheumatic infection has a tendency to recur anyway, and perhaps this is the answer to those problems which came back in our laps, — because we were a little bit hurried in getting them out of the hospital.

I think we have to individualize the child, bearing in mind that on one hand we may make them heart-conscious and their families heart-conscious if we insist on too long a period, and on the other hand, of having them return with a slap in the face to us as clinicians if we do not keep them long enough.

Certainly the sedmentation rate, certainly an exercise tolerance and certainly careful observation of any child with rheumatic history or with rheumatic findings would indicate conservative management.

I don't know how one could answer the question more specifically than to say each is an individual problem, deserving of individual consideration.

Dr. Murphy: The next question is: *"What is the most important single finding in the examination of the heart?"*

Undoubtedly the most important single sign is heart enlargement. A heart that is enlarged is most likely a diseased heart. A heart that isn't enlarged, while it may be diseased, chances are is not.

A heart may show many signs, — murmurs, and so on, — and if the heart is not enlarged, apparently it hasn't suffered great strain. This enlargement can be determined by simple palpation; it is not necessary to get down to such fine points as teleo-roentgenological examination in order to determine this.

The next question is: *"What is the value of oxygen therapy in heart disease?"*

I will ask Dr. Cole to answer this question.

Dr. Cole: Many people who have serious cardiac disease with dilatation and in whom there is a certain amount of pulmonary edema have great difficulty in sleeping. I have found and imagine many of you have that when these people are put to rest at night with a sedative and then given twenty to thirty minutes of oxygen they will go to sleep like other people and will often sleep the night through. They will not do this unless the oxygen is given and the stimulation of the carbon dioxide reduced to allow them to relax. I feel definitely that this is one of the best uses of oxygen that I have found. I am very sure, too, that in recent years many lives have been saved through the use of oxygen and that it deserves a wider use than it now has.

Dr. Murphy: Good!

The next question is: *"Of what value are the sulfonamides in the treatment of rheumatic infection?"* And another question says: *"What success has been obtained in the treatment of subactue bacterial endocarditis with the newer drugs, i.e., phosphorus, gramocidium, pentacilium, sulfonamides, etc. Also fever therapy?"*

I will ask Dr. Stevenson to answer that.

Dr. Stevenson: "Of what value are the sulfonamides in the therapy of rheumatic infection?" I think I can answer in one word by saying so far as I know, at least, "none". In the group of children of which I spoke a moment or two ago, we felt the rheumatic fever had its origin from streptococcus invading organisms. If that were true, some of the sulfonamides, particularly sulphanilamide, might be of some value.

We saturated these youngsters with sulfonamides, and were successful in doing only one thing, — causing sulfonamide reactions. The rheumatic episode went on as usual.

I think the same thing might be said in answer to the second question: "What success has been attained in treatment of subacute bacterial endocarditis with the newer drugs?"

In 1939 it was felt the sulfonamides, particularly the sodium salts, in combination with heparin, were of value and we saw on the service at the time three women, wives of physicians,

who had had cardiac lesions and who followed the classical picture of subacute bacterial endocarditis. They were given intravenously sodium sulfapyridine and other sulfona products with heparin, and strangely enough, there was a return to the normal so far as temperature and symptomatology were concerned.

One of these women relapsed within a period of six months. The other two within eighteen months.

I have seen nothing in the literature and have had no satisfactory success with any of these new products, in subacute bacterial endocarditis, and I might add that in one case I feel our enthusiasm for the use of those preparations with heparin proved disastrous, — perhaps sooner than would have been expected without them.

Dr. Murphy: The next question is: *"What is the place for Papaverine in cardiovascular lesions?"*

Papaverine is one of the newer drugs that has been used in various kinds of coronary disease. Papaverine is one of the alkaloids of opium and differs from others in that it seems to have the factor of increasing the blood flow in the coronary system rather than diminishing it, as do morphine, codein and others.

In acute coronary occlusion papaverine has been used in one grain doses intravenously every three or four hours; one may use it intravenously or by mouth three or four times a day. Papavarine does not seem to leave other bad effects that other opium derivatives do. We have used it for several years and have been mighty pleased with its results.

It is also of value in angina pectoris where one does not want to use a nitroglycerin. Possibly it is better to give the patient a grain of papavarine by mouth instead of nitroglycerin. In many places papavarine is supplanting nitroglycerine in attacks of angina pectoris.

Next I will ask Dr. Cole to take this question: *"What is your experience with testosterone for angina pectoris?"*

Dr. Cole: In answer to that I would say that there was a time when we were given to understand and given the promise that this material would give us considerable relief. I gave it a very extensive trial two or three years ago and gave it up. Then I recently went back to it to see if I could do any better, and in both instances I am quite well satisfied that it gave me nothing at all. I did not get the results that other people seem to have gotten, and to me it has proved a great disappointment. I don't know what other men have found, but I still have one patient that I am using it with at the present time and, frankly, I think it is going to be a disappointment. It has not helped.

We were told, and we were led to expect at one time — and not so very long ago, — that we had perhaps found the fountain of youth in testosterone. It has also proved to some extent disappointing in that respect.

Certainly, with the cases where I have used it, they have been so far as possible selected cases of angina without definite pathological findings except they gave a clear anginal pain, — I have been much disappointed and they have not been a success in my hands.

I would like to know if the other two men would speak about the same thing.

Dr. Murphy: My own experience with testosterone has been about the same as that of Dr. Cole. Some people report good results in the control of anginal pain by the use of oreotone, testosterone and some of those male sex hormones. Well, the patients in Milwaukee react differently than those reported in the literature as it didn't do any good. We tried hard, gave big doses, but they did not seem to react.

The next question is: *"What prognostic significance of a persistent diagnostic 'Q' wave after the period of six months following a coronary?"*

I will ask Dr. Stevenson that question and then another one along the same line: *"A persistent 'Q' wave, — prognosis from the insurance standpoint."*

Dr. Stevenson: I should like to answer this question or attempt to answer the question from the standpoint of insurance medicine first. "Prognosis of the persistent 'Q' wave from an insurance standpoint."

Some years ago Dr. Pardee, I think suggested that a remnant of coronary occlusion would frequently be elicited in the electrocardiogram by careful evaluation of the "Q" patterns. I think it was Pardee who also said in order to be of significance, a "Q" wave must be at least 25% of the height of the initial deflection. About

this time, some of the larger insurance companies in the east began to report their statistics from the standpoint of the "payoff" on vascular disease and went back over some of their experiences. Now I am not just sure what "The remnants of 'Q' wave" really means from a prognostic standpoint.

We do know in insurance medicine that those patients who have died of coronary disease after their coronary episode of several months increased the hazard from the insurance company's standpoint considerably.

For example, of a thousand patients who have had 'Q' 3's, we know, as actuaries, 14 of the thousand will be dead of coronary disease within a year. What we do not know is which of the thousand will be the 14, so we have to underwrite them all alike.

I think a deep 'Q' is of much more significance. I am convinced we see a good many 'Q' waves in a good many electrocardiographs. I am frequently unable to satisfactorily explain what the minimum 'Q' signifies. Possibly it is a remnant of coronary insufficiency; in many instances it is undoubtedly the only remaining evidence of posterior coronary occlusion. If the myocardium has regenerated through collaterial circulation to a point where the scar is firm, where there has been no failure, where the heart muscle is perfectly capable of carrying on the particular individual's activities, certainly we cannot attach too much significance but there are those who continue in their physical endeavors to conduct themselves as of twenty-five years of age instead of forty-five or fifty, or even a higher age group, and I think in those problems the 'Q' wave is of far more significance than it would be otherwise.

So far as the prognosis on persistent "Q" wave after a period of six months following coronary occlusion, I'd say that the prognosis would be poor. Certainly it is indicative of change in the myocardium. I think it might very well lead to other coronary episodes, knowing that each successive one was more dangerous to the carrier than the one preceding.

Dr. Murphy: We cannot answer all these questions, but we will answer a few more. One question here that is important says: *Can you give a rough method of diagnosing auricular fibrillation without an electrocardiogram?"*

That gives me courage to speak about something I think is very, very important and that is the study of our management of heart disease, today said to be undergoing radical change among general practitioners.

I know that it is true that the general practitioner is the man to handle heart disease, — irregularities and other types, — because heart disease is the most important disease that any general practitioner treats, because it is the most common disease, and he has to take care of it. He is the man on the ground; he is the man who can be prompt and can give personal and continuous attention to the cardiac. He is the man who must continue the handling of the case.

The electrocardiograph has done great things and many general practitioners whom I meet not only in Wisconsin but in Michigan and Iowa and various other places, say, "Gee! I used to handle heart cases pretty well but recently I don't know, it has gotten too complicated for me!"

Now I think this is a great mistake for men to get that sort of an idea. Of course if they move to a large center where investigative work is going on and if they watch the work of the clinics with the electrocardiograph, with the velocity studies, venous pressure studies, volume studies, of course that is complicated, but all this is not necessary.

The average general practitioner always was able to tell about, let us say, venous pressure without any elaborate instument. He looked at the veins in the neck and he knows if they are swollen that pressure is increased in the venous system. As to the speed of flow, he can obtain plenty information there if he just watches the condition of the hands and feet.

I don't say that disparagingly or against the instruments of precision; I am not one such as Hubbard referred to when he said "If a man is not up on a thing, he's down on it," because I am familiar with those things, but we can get along without them and the general practitioner shouldn't become confused with these instruments and these reports that have come out.

I think that the whole thing with the cardiac study is the use of judgement and the man who practices generally and has seen many of them is the man whose judgement is best relied upon.

The general practitioner was doing pretty good in heart work and does it now very well, but he becomes confused when he attempts to correlate the electrocardiographic tracing with his patient. If he'd just forget the electrocardiographic tracing and treat the patient, he would come out all right.

Auricular fibrillation is a disease of older people. It is especially very apt to occur in hyperthyroidism. How do you diagnose it? I don't think you need an electrocardiograph to make the diagnosis. If the heart is irregular, if it doesn't have regular pattern, if it is continuous, then if one listens to the heart and counts the beats, feels the pulse and counts the beats there, if there is a difference of ten or fifteen beats between the apex and the wrist, that is certainly auricular fibrillation and one doesn't need an electrocariograph to tell it.

The next question is two in one here; is that right? *"What is the minimum time for coronary patients to return to work?"* And this long question; I am going to ask Dr. Cole to wrestle with this: *"Occasionally one sees patients with decompesated hearts, especially after recovery from coronary occlusion, whose heart rate remains around 90 in spite of digitalis, to the point of intoxication. The rhythm is normal but the patients remain dyspneic and ortheopneic even at bed rest. The basal rates are normal. What can be done for these patients? Can they be improved or have they reached the end of the line due to their marked myocardial damage?"*

A very big question, Dr. Cole.

I chose to combine those two questions because they really bear upon the same thing. I think there is no minimum time for an ordinary coronary occlusion, because that is too broad a question. Like everything else in medicine, you've got to individualize very strongly.

A coronary occlusion which looks very mild to begin with may end up very suddenly within the first week or within the first month or within the first four or five months with an acute ventricular fibrillation and sudden death. On the other hand, a very severe coronary occlusion which apparently, from all clinical signs, involves the whole main branch, may make a recovery and live for several years before he dies of another occlusion or of something else.

Automatically, in my own practice, I regard even the mildest of coronary occlusions with a considerable amount of circumspection. I don't trust them. I do not know what the rest of you men do but I fear the sudden death feature after an acute coronary occlusion so much that I routinely use quinidine for the first weeks after the coronary occlusion in the hopes that I may prevent a sudden death.

Whether that has done it or whether we have been more fortunate in the way of handling coronary occlusion, I am not sure, but I am sure of one thing: That since I have been doing that, I have been getting much fewer sudden deaths after coronary occulsion than I used to get and those that I get as a rule are patients that have had their coronary occlusion some months or some years before and are not on quinidine at the time they developed their sudden death.

Coronary occulsions must each one be judged according to the amount of damage that has been done. There are certain instances in which the damage is so severe, where the occulsion is so extensive, that life is impossible. Those people usually die either at once or within the first three or five days. There is a second group that live beyond that four or five days; they have enough reserve to carry them through the first four or five days normally, then another certain amount of treatment will make a difference and carry them on until they gradually develop, over the next thirty to sixty days, a gradually losing picture with congestive failure and they die.

There is a third group in which I think management is a main factor in survival. Those two first groups I think were people who had too much damage to survive. In this third group where the original shock is survived, there still remains some reserve but not sufficient to carry on. If these people are rested over a period — and automatically my order is not less than six weeks complete and absolute rest in bed — they may be expected to go on to recovery. Beyond this six weeks period the time is varied according to what is necassary to put back reserve in the heart, and as I get them up it is done cautiously and very slowly, usually with quinidine as a preventive of ventricular fibrillation along with other drugs.

The other question about the patient who has been down for some time and in whom digitalis has not helped, whose pulse remains persistently high, and who is in chronic failure, I should

say that he is on the borderline and that if you can hold him over for a time you are fortunate. You may possibly get improvement. There is always a possibility that the old vessel may reopen or a collateral circulation may develop but it takes much longer and occurs at much greater risk than it does in other places throughout the body. Some men never develop a collateral circulation. Anatomical studies by Schlessinger and others of his group have shown this very well. It depends to some extent upon the man's luck. If he has his occlusion posteriorly and it happens that this vessel supplies the posterior heart and the septum, he is likely to have a serious time of it either with a right or left coronary. If, on the other hand, he has a balanced posterior circulation, an occlusion here may not be so serious and collateral circulation may develop from the other side. Time and careful observation are the only methods of determining which is which.

I have had a number of patients who have had to remain down six months to a year. Then they returned to work in full capacity and lived for considerable periods. Those patients give us encouragement to persist with those who have chronic failure over a long time.

Its a discouraging thing but there is always a possibility that where the iodides, perhaps, are used, you may be able to give this man enough blood supply and give him enough time to repair his damage and he will get more than you think he will. It's just like the recurrence of a stroke. You get a great deal or most of your improvement within the first ninety days and after that it is a very slow business.

You don't know exactly, when you first see a stroke, just what you will get out of it. I think the same thing is true of coronaries. They look very bad in the beginning and as time goes on you may be surprised that they do as well as they do.

As to the dosage of quinidine when used routinely as I have stated, I usually use between six and nine grains a day for routine use. That isn't a very big dose but sometimes you get too much slowing.

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REAL KNOWLEDGE

"The knowledge which a man can use is the only real knowledge, the only knowledge which has life and growth in it and converts itself into practical power. The rest hangs like dust about the brain or dries like rain drops off the stones."—Froude.

## INDUSTRIAL OPHTHALMOLOGY AND OTOLARYNGOLOGY

Gordon F. Harkness, M.D.
DAVENPORT

Mr. Chairman and members of the Section on Ophthalmology and Otolaryngology of the Illinois State Medical Society, I first want to express my appreciation of the honor of being your guest at this meeting.

I have been prompted to take as my subject Industrial Ophthalmology and Otolaryngology for two reasons. First, because of the unprecedented production by industry in war work. Secondly, because there is a great deal of decentralization in this effort and many participating plants are not large enough to support full time medical staffs. They are without the larger metropolitan areas and must depend for their medical and surgical services upon men who are primarily private practitioners, and in our own field men who in that capacity embrace both ophthalmology and otolaryngology.

I make no pretense of offering anything new or startling but rather offer some of the impressions of one who has been for years associated with industrial medicine as a part of his private practice. Time does not permit a complete survey of such a large subject and if I seem to discuss what seem to be trivialities I would remind you that the proper care of the trivialities in medicine is the best preventive medicine that we have to avoid major complications. I, also, take refuge in the memory of an evening in Chicago some years past when the guest speaker of the evening devoted practically his entire time in discussing the proper care of the punctum lachrymalis. The speaker was a man whom I considered one of the outstanding clinicians of his time in his own field of medicine, the late Dr. Harold Gifford.

The conservation of public health is recognized as a governmental obligation. Legislation relative to the duties and responsibilities of the employer and the rights of and compensation that may be due the employee are but a part of this program. Not only is clarification of such legislation needed in many states but the lack of unification of the various state laws still leaves much to be accomplished. Industry and

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carriers of accidental risks have for a long time looked to the medical profession for guidance. It is true that surveys have in the past been conducted by the Life Extension Institute Eye Conservation Council and other agencies. B. E. Kuechle, Claims Manager and Vice President of the Employers Mutual Insurance Company of Wausau, Wisconsin, in a paper before the Wisconsin State Medical Society in 1938, stated "The vital bearing of sense defects on the efficiency of individual producers must no longer be overlooked. I am sorry to report that in looking for guidance from the medical profession in this problem, leadership has until at least very recently been decidedly lacking."

The Committee on Compensation from the Section on Ophthalmology has given us for a number of years a standard by which one can speak with some authority as to visual defects. We now have the report of a group of consultants of the Council on Industrial Health endorsed by the section on Laryngology, Otology and Rhinology of the A. M. A. which has submitted a tentative standard for estimating the percentage of useful hearing loss. These constitute a basis from which to apply medical knowledge. Abstract medical standards are but part of the picture. Actual findings may be at variance with medical standards. The reasons for the same are necessary in completing any industrial survey.

The work of the Council on Industrial Health of the American Medical Association is the means by which practical medical leadership can be provided. It is surveys such as conducted by Dr. Hedwig S. Kuhn[1] that point the way to the practical application of medical knowledge. The able leadership of A. C. Snell in Ophthalmology and W. E. Grove in Otolaryngology as committee chairmen facilitate the correlation of the findings of their committees with studies as made in the placement of the industrial employee under the direction of Joseph Tiffin, Ph.D. of Purdue University. As Tiffin[2] states "visual patterns can be established that will make for success for a specific job but visual patterns are not the same for all jobs." Kuhn found that distant acuity of vision was no measure of individual efficiency at close range jobs.

Grove[3] (Hygeia, November 1941) after studying statistics from the State Industrial Commission of Wisconsin and from the Michigan Department of Labor concluded that the person who is hard of hearing is if anything less susceptible to injury than the person with good hearing.

The industrial surgeon must realize that arbitrary medical standard alone are not the answer to industrial needs. Preemployment examinations and the correction of refractive errors thru a cheap contract with some optical company likewise fail in answering the visual problem. The prospective employee who fails to meet visual standard is entitled to not only a refraction but also the diagnosis of any eye pathology that may be present. The economic factors preclude an individual examination of every prospective employee by an ophthalmologist. Screening tests properly supervised can successfully weed out and select for complete examination those with substandard vision. The ophthalmologist must in his turn be placement program minded, he



Illustrating satisfactory technique for removal of corneal foreign bodies without any assistant.

should know his industry, he should try and help the man to a job at which he can be successful and provide for industry a possible efficient and valuable employee in his particular placement. Rechecking of vision and hearing at intervals provides a basis for computing compensation losses due to accident as well as revealing that the individual may be in need of additional remedial measures.

Quoting Snell[5] "The correct basis for evaluating vision is the measure of the efficiency or usefulness of the eye in performing its normal physiological function and this in terms of percentage."

We are not primarily interested in the economic deductions relative to earning power after the functional disability has been computed. Such decisions are not our province, yet our opinions are asked. The environmental conditions are not such a factor in visual disabilities but are in losses of hearing. We may test with tuning forks and the audiometer but it is the perception of the human voice as a means of communication that is paramount to the individual. This perception varies with the voice and with the surrounding noise level. When we can devise a means of simulating the noise level of the man's job and then test him with a recorded standardized human voice we will have a practical test of hearing deficiency.

The industrial surgeon should be aware of his rather unusual status. While assured of his compensation from the employer or his agent, a casualty insuring company, he has a position that transcends that of an employee. As far as the patient and his accident is concerned, he is first and all the time his doctor. The application of his knowledge and skill differ in no way from services that he might render his private clientele. More than just rendering this service he should by his attitude try and make the individual conscious of this relationship. Once established in the patient's mind it is not only a factor in aiding the patient's recovery but also in maintaining satisfactory relationships between employer and employee. The industrial surgeon has another role as an ally of the safety engineer. The American workman will cooperate better when convinced than when ordered to comply with certain rules issued to reduce the hazards of his job and for his individual protection. With a knowledge of those hazards the surgeon can well devote a little time in personal conversation with the injured employee as an effective part of an educational program. An official visiting inspector of one of the local plants was recently a patient. Suggesting that his safety glasses should have incorporated his own refractive correction, he demurred, stating he did not use them much. I said to him "You ought to be fired, how can you expect employees to cooperate and conform to safety rules for their protection when you persist in violating those same rules." I meant it and he knew I meant it. He said "you're right" and I think I made a Christian out of him.

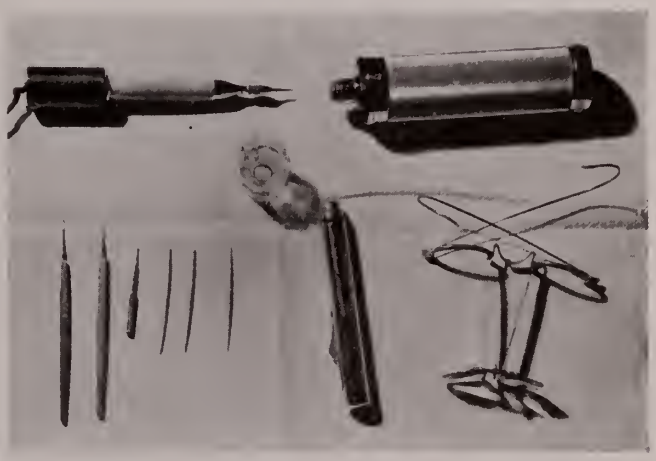
The question of the non compensable hazards of industry needs clarifying. If there is a question of doubt it should be decided in the favor of the employee. Epidemic kerato-conjunctivitis, which has of late received so much attention is an example of a disease together with simulating forms of conjunctivitis that need clarification as to compensability. First-aid stations have no right to send doubtful cases to the surgeon without explaining to the employee that there is a question as to the compensability of his condition and that he is being sent to the doctor for a decision. If the employee is simply given an order to report, he assumes he is going to be taken care of. To be told otherwise by the surgeon destroys the proper patient-physician relationship. Let it be said to the credit of the casualty insurance companies with whom I have had contact that without exception they endorse the sentiments here expressed. They profit thru safety engineering, they profit by good medical care, they want facts and good diagnoses and not biased medical opinions.

Just as clearly defined is the industrial surgeons responsibility to the employer or his agent. The surgeon is the employers main line of defense against malingering. Inconsistencies between subjective and objective findings more often gives the first hint of possible malingering. In this connection a full history and statement of the accident, cause and degree of disability by the patient may later be a bulwark of defense against fraudulent claims. At the time of the accident the thought of excessive claims has rarely entered the minds of the injured employee or his family. Time does not permit a recitation of malingering tests which are readily available and I would rather speak of the psychological

approach. The surgeon must be aware that there is a recognized distinction between malingering and post traumatic neurosis, in spite of the fact that the final financial settlement is necessary for the cure of each. In the former World War I learned a valuable lesson when given the authority for some time in one of the camps relative to the acceptance or rejection of inductees because of visual defects. What might be termed a solicitous sympathy by the physician with the individual and his claimed defect is a powerful factor in disarming him. It is like giving a man enough rope with which to hang himself. Once malingering has been established, one must still use diplomacy in bringing about final capitulation. The army method would hardly apply to civilian life.

Medical literature does not supply all the answers. One must use his own wits and ingenuity. I recall a personal case in point. Following a fall and this was before our present compensation laws, an employee brought suit in a large amount for impaired vision of his right eye. There was no demonstrable eye pathology, the vision was as claimed and the condition diagnosed as an amblyopic eye of long standing. A friendly attitude having been adopted, the professional visits became friendly chats. I learned of his hobbies and his recreations. Hunting was his principle sport. The fact that he was righthanded was established by his writing and the like without his knowing they were really part of his tests. While chatting with him about one of his hunting experiences I suddenly said to him "You have always shot from the left shoulder, haven't you?" His quick affirmative reply was all that was needed to collapse his entire case. Yet one can be hoisted on his own petard for years later my medical testimony relative to a right eye pathology which I still feel far antedated a claimed accident, was nullified by a lawyer who brought in three odd looking witnesses to testify that prior to the alleged accident the plaintiff had always shot from his right shoulder.

In the aural field with claimed total loss of hearing, the malingerer may outwit the examiner and eventual exposure depend on plain detective work. Claims for partial loss of hearing are not so difficult to establish.



Essentials for removal of corneal foreign bodies:

1. Binocular Loupe.
2. Condensing Lens Illuminator.
3. Two Corneal Spuds, flat and pointed.
4. Corneal Burr.
5. Toothpicks (round and pointed) and covered with moist cotton.
6. Dapin Dish for solution of Boric Acid.
7. Corneal Burr mounted in Green Electric Trephine.

The Stenger test is as reliable as any but I have found a rechecking of audiometer graphs and the use of the audiometer malingering apparatus give one the best permanent record of inconsistencies between subjective and objective findings. As previously stated we have fairly well established standards for the determination of visual losses due to accident and have made a creditable beginning relative to hearing losses. We have no scale for the auxiliary functions of the eye, ear, nose and throat, as the action of the lids, lacyrymation, lack of normal muscle balance and facial disfigurement.

The same applies to the nose. I have had during the past year a case of traumatic essential anosmia in a professional cook. The insurance adjuster came to me and asked "On what basis can I approach this claimant with a fair offer of settlement?" I replied that I could not tell him but he had better be prepared to be willing to pay a substantial sum for if a professional

cook who could not smell ever got into court she could probably establish her right to a very material compensatory award.

Permanent damage to the membrana tympani as caused by flying molten particles with direct evidence of accompanying burns of the canal wall do occur. I have had two such cases during the past year in which the evidence of the burns was present but no metallic particles were found. The compensatory damage is a matter of personal opinion.

Proper lighting, more perhaps in the province of the saefty and lighting engineer is important in the prevention of accidents. J. MacNalty[6] (British Med. Journal) states that Medical Research Council on Miners Nystagmus after prolonged investigation concluded that poor lighting was the essential factor in producing this condition. Thomas Allen has stated that surveys have shown an increase of accidents in plants with the onset of darkness.

Quoting Leonard Greenburg,[7] approximately 300,000 accidents occur to the eye in American industry each year and of this number compensation is paid in approximately 60,000 cases. He estimates the direct cost between thirty and thirty-seven million dollars and with the indirect cost a total of approximately $60,000,000. I am in no position to question such figures but feel sure that in my own practice the proportion of compensable eye injuries does not attain anywhere near such a high percentage rate.

Allen and Carmen[8] state that 80% of all eye accidents are due to flying fragments, mining and quarrying having the highest percentage of severity in eye accidents. Allen also states that approximately forty per cent of industrial eye accidents occur when working with abrasive wheels and metal working machines. Certain it is that by far the greatest number of patients that the average ophthalmologist will see with industrial eye injuries are those of minor significance, caused by small flying particles lodging on or imbedding themselves in the cornea. The surgeon has not only the responsibility of the proper care of these trivial acidents, but the elimination of a possible more serious injury and what is often forgotten, a responsibility to industry to reduce within the limits of safety to the individual the loss of man hours of work.

Without attempting a complete dissertation of the care of minor eye injuries I would like to call attention to a few of the essentials and stress some procedures in which the literature seems to lack unanimity of opinion.

First-aid stations unless equipped to render their service aseptically should leave all corneal injuries alone. If so equipped they should be instructed to limit their services to the most superficial foreign bodies that are removed by very light brushing with a sterile moist cotton tipped applicator. Referred to the ophthalmologist there is first the history of the accident. Not only the location of the foreign body, but also the notation and location of old scars and the presence of any chronic inflammation are important. Give the local anesthetic of choice time to act. As is well known the most superficial injuries are often the most painful. Abrasions not seen without staining may be extremely painful. Hot foreign bodies as from a grinder's wheel may anesthetize the cornea so that the individual may not be aware of any irritation for several hours after its striking the cornea. The educational campaign includes telling the individual of the importance of early attention, without scolding him because of a delay due to his not being aware for several hours that his eye had been injured. Contusions with negative corneal findings demand careful ophthalmoscopic examinations. A softened eye ball portends a serious ocular injury. Penetrating foreign bodies may cause only momentary discomfort. Any abnormal eye condition associated with an injury which cannot be explained by the superficial position of the foreign body itself demands an x-ray. A small hemorrhagic area of the ocular conjunctiva, associated with an ocular injury even without any apparent scleral injury deserves x-ray investigation. X-rays for intra ocular foreign bodies should be taken not only to establish but to eliminate their presence. Casettes, paste board film-holders and screens may accumulate opaque foreign particles. Exposures for ocular foreign bodies taken with the film only in its original paper covering give less chance for confusing shadows, due to extraneous particles of opaque material. During the past year I recently had a film reported as negative. There were several tiny light spots on the film reported as due to the cassette. A second film properly taken revealed the intraocular foreign body. One of the light spots in the first film having been the foreign body. Penetrating corneal wounds with

a definite history of cause precluding the possibility of an intraocular foreign body and with a small iris prolapse or synechia demand immediate attention as an office procedure in preference to a possible delay due to hospitalization. If in the extreme periphery the strongest myotic treatment is started without delay. If not near the periphery the strongest mydriatic treatment even to the subconjunctival injection of atropine and adrenalin is used. The corneal wound is left absolutely alone for an hour after the first myotic or mydriatic, until the pulling effect on the iris has been established. Then careful manipulation of the corneal wound will often release the iris and the drug action will pull it away from the wound. The success of this technique depends largely on how early it is instituted. Small synechia which persist should be left until the eye has become quiet, when practically the same results may be accomplished with a knife needle.

The removal of the corneal foreign body carries with it the dicta, the deeper the body, the more permanent the scar; infected wounds mean more scarring; and a peripheral scar may not of much moment, but a central scar is always of moment. The binoccular loupe and the electric lighted condensing lens are necessities. Oblique illumination from various angles is necessary to assure one of the complete removal of the foreign body and surrounding corneal debris. Two types of eye spuds are necessary, the pointed and the flat type. Indiscriminate scratching at a foreign body is to be condemned. Careful loosening and removal enmasse is the desideratum though not always achieved. Charred corneal tissue surrounding a foreign body continues to act as a foreign body. There seems to be some controversy as to the desirability of its immediate removal. I have heard an ophthalmologist whom I greatly respect condemn the corneal burr. His contention being that in a few days nature will so soften the surrounding tissues that the removal will be facilitated and with less eventual scarring. I wonder if he is not partly right and partly wrong. The hand burr used indelicately had better be not used at all. Deep in the corneal stroma it has a distinct risk. But with charred corneal tissue more less superficially located, continuing to act as a foreign body exciting inflammatory reaction and increasing vulnerability to infection, I believe its early removal is desirable. The hand burr or better still mounted in a Green motor driven trephine instrument, the burr can be used with great delicacy of touch under loupe inspection and proper illumination. The early removal of this tissue is advocated in order to facilitate more rapid healing, lessen the danger of infection and without increasing the after scarring. I have found the round sharp pointed toothpick covered with a very small amount of thoroughly dampened cotton a valuable adjunct in cleaning out the corneal area. Dry cotton should never be used, the fibers catching on the edges of the corneal wound. In the technique I have found that making two cotton finger cots moistened with an antiseptic solution of your choice and placing one on the third finger of each hand gives two practical lid retractors. The first finger and thumb of each hand are free, the left to handle the light and the right for the instrument. Efficient work can be accomplished even without an assistant. I find myself at variance with the generally expressed opinion to obtain the vision at the first examination. It is the vision at the time of recovery that is important. If the foreign body is so superficial that a second visit will probably not be required the vision is recorded. If not normal or not otherwise explained a second visit is ordered. The ordinary corneal foreign body patient should be seen again. The patient is asked whether his vision is affected. If he complains of decided blurring it is investigated. If not he is told that his return is requested for his own protection, that a record of his vision on recovery is for his benefit. It is true that some men do not return. If they do not it is so reported on the insurance report but I believe that for future records it is unfair to the employer to have recorded a subnormal vision that is no criterion of the actual vision, and which has not been later corrected because the man did not return as requested. Always evert the lids and always look over the other eye. You may save yourself some embarrassment, if nothing else.

The after care and the use of an eye patch finds a difference of opinion. Walker and Auten[9] speaking of corneal foreign bodies state that under no circumstances should an eye be bandaged or a patch applied. The more generally given advice is to use the patch, some even con-



Third finger of each hand covered with thoroughly moistened cotton finger cots which serve as lid retractors.

tinuing its use until there is no staining of the cornea. Quoting from Behrens,[10] the Eye and Its Diseases. The lachrymal secretion is a mild soothing neutral solution and an effective germicide. The active substance is probably a lypozyme, a colloid found in most tissues, abundantly in the tears and in small quantity in the white blood corpuscles. It is destroyed by heat at 75°C and acids and alkaloids. Its concentration is sufficient to kill the most common pathogenic cocci.

Here we have a surface under natural conditions being bathed by the most ideal of germicidal solutions. A surface from which there is the freest drainage and where the slight irritation and act of winking act as stimuli for the production of the neutral germicide solution. The set up certainly conforms to the surgical principles favoring healing. Yet practically immediately after the removal of a foreign body many patients feel more comfortable with an eye patch. Personally I feel that perhaps a middle of the road course is more desirable and I have never seen any harm from the moderate use of the eye patch. I feel my responsibility relative to this patient's man hours of work. Many plants will not accept a man back on the job with an eye patch. If seen during working hours and the foreign body is very superficial he is sent back to work without any patch. If the eye feels irritated an ointment and a patch is applied for a couple of hours. Instructions are given that if after a couple of hours the patch is removed and his eye feels comfortable without light sensitivity he can return to the job. If later in the day, the man is told to remove the patch before retiring, that in the morning if there is apparent recovery he can report for duty. He is to report for a check-up. The fact that there is a tiny area that might stain is largely disregarded. It is the clinical subjective symptoms that are the principle guiding signs.

Coincidental acute sinus inflammation associated with trauma makes difficult the causative relationship of each to serious post traumatic infection but does not materially change the responsibility as to the individual case.

The causative relationship of chronic sinus disease following trauma is a much more difficult question to answer. Because of the lack of a good or reliable previous history, and thereby forced to assume there was no pretraumatic disease present often means an opinion based on a false premise. Hearing losses, tinnitus and vertigo associated with injuries about the ear, mastoid or skull are a perplexing problem. Can the cochlea be injured to produce partial loss of hearing? Can the labyrinth be injured to cause partial loss of function? Medical literature while favoring an affirmative answer still leaves one unable to make dogmatic statements. The hearing loss may be established but the industrial loss is most difficult of evaluation.

Obtaining a careful history of the onset and sequence of symptoms relative to the internal ear is of first importance. The spontaneous signs of vestibular disturbance nystagmus, vertigo past pointing and falling are of first significance in

establishing a causative relationship to the trauma. The induced reactions while important to verify subjective complaints are possibly more important when reactions are normal to eliminate the internal ear as the source of the disturbance.

Industrial medicine is more than just practicing medicine. It is not laying down medical dictums, but rather the practical application of medical knowledge to the needs of industry.

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DISCUSSION

Dr. H. W. Dale, Chicago Heights: I would like to ask Dr. Harkness what instructions he gives first aid men in industrial plants about putting a patch on a man when he sends him to the doctor, or having the man work half a day before he goes to the doctor, and then putting the patch back on the eye when the man returns to work because he may catch cold. I have difficulty in controlling that. Maybe a man will come back with a patch on the eye, which was put on an hour after he returned to the plant, which invites development of bacteria.

Dr. Clifton Turner, Peoria: I certainly enjoyed Dr. Harkness remarks and very careful consideration to detail, especially on the visual acuity measurements as brought out by Dr. Kuhn; and also his remarks on our shortcomings with testing of hearing disturbances. I would like to ask if he uses any ophthalmic ointment, antiseptic or anesthetic, post-removal.

Dr. Alfred Lewy, Chicago: I do not presume to discuss so masterly a presentation as this paper, but I do want to commend his broad perspective and approach to the subject, which stresses the necessity of doctors remaining doctors. We have too much of specializing industrial surgeon, the one who does nothing else, in seeing each case only from the standpoint of saving compensation. I think this paper should receive great publicity as an antidote to the defects in our compensation laws and their administration.

Dr. Max Hirschfelder, Centralia: I would like to call attention to one shortcoming of the compensation laws. Examinations prior to employment are made by many big companies, but not by smaller companies and we are always at a loss in exaination of an injured man to say whether a defect in vision was present before or after the accident. When a man with a corneal scar sees 20/40 we always ask ourselves if this scar is big enough to account for the decrease in vision. We should stress the necessity of examination of employees before their being taken into industry, with the smaller ones. We treat coal miners, not one of whom has been examined before employment. It is hard to evaluate their post-accidental claims, unless one has a pre-accidental record.

As to refraction after accident, I have found in several cases that corneal scars could be improved by refraction. I looked up the literature and could not find very much about that. It is my opinion that there is a possibility that the refractive error is changed due to change in the corneal curvature or corneal density, especially after a corneal ulcer. About 20 or 25 per cent require refraction after an accident; everybody who does not see 20/20 should be refracted after an accident.

When removing a foreign body I usually have a patient lie down and sit on a chair behind him. It makes it easier to remove the foreign body, your hand is steadier and the patient is steadier, and it facilitates removal.

Dr. Gordon F. Harkness, Davenport, Iowa: (closing): About putting on an eye patch and going back to work from the first aid station — I do not think that should be done. They have no business to do it.

Dr. Turner asked about the use of ointment. It is not of much use as a germicidal, but it does seem to make them more comfortable; we use it. But the tears themselves have the best germicidal action.

I agree with Dr. Hirschfelder about pre-examinations. If we find a reduced vision we always make a quick refraction. I try to keep from becoming commercial in this work, because one can easily build up a refraction business by impressing men that they need glasses. But we do try to find out if refraction will improve the vision.

As to the question of refraction improving the vision; whether it is due to the accident or not, if it is the same in the injured and uninjured eye, you can assume that the lack of normal vision was due to a refractive error prior to the accident. Of course you still have the question whether the injury had something to do with it, and pre-employment examinations would help out on that very well.

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I would define true courage to be a perfect sensibility of the measure of danger, and a mental willingness to endure it.—*William T. Sherman Memoirs, II,* 1875.

# WARTIME CONSIDERATION OF SYPHILIS

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A survey of the literature on the effect of the second World War on syphilis reveals that this reading matter is rapidly becoming extensive. Such a review elicited four points that I believe are of sufficient significance to warrant emphasis. They are summarized as follows: (1) decrease in the venereal disease rate in the armed forces but increase in the rate among civilians, (2) the enthusiastic approach to, and the well-organized application of, the newer intensive methods of treatment in centers for patients with acute syphilis, (3) the use of sulfathiazole as a prophylactic agent against gonorrhea and (4) the conspicuous absence among the civilian population of discussion, instruction and application of prophylactic measures against the venereal diseases. In the armed forces prophylactic measures are actively in effect but vary according to the interest and energy of the various officers, some of whom apparently cannot be sufficiently stimulated by the officials in charge of control of venereal disease to co-operate wholeheartly in the effort. Although the four points mentioned are to me of outstanding significance in this war, there are many other features of the present day venereal disease situation which are similiar to those encountered in World War I and subsequent to it, and which will not be discussed in this paper.

An over-all estimate of the rate of venereal disease in the armed forces or the civilian population is not difficult to obtain; however, such data are not significant unless they are specific as to the part of the country — today perhaps I should say world — in which the survey was made, the relative incidence among white persons and negroes, the economic situation in the locality at the time the study was made, the activity of the venereal disease control program and the liquor situation in the community. For example, a comparatively high rate of venereal disease would be likely to follow successful invasion by the armed forces of an area where there had been no previous attempt by local authorities to control the incidence of gonorrhea or syphilis and where the officials in charge of venereal disease control had not had an opportunity to function. Neither is it unjustifiable to anticipate a relatively high rate of infection in southern communities where large numbers of negroes are assembled, nor, by the same token, to find a relatively low rate of infection among persons located in the colder climates. The rate in congested urban centers is always higher than in small or rural communities. Likewise, the factor of consumption of liquor plays a prominet role in the incidence of venereal disease, as the rates of infection are usually higher when drunkeness is of frequent occurence. Accordingly, the rate of infection varies greatly in the South as compared with the North and tends to be high in new industrial areas, among any migrating population in times of unrest, among unsettled families, and in the presence of such a tremendous social and economic upheaval as we are in at this moment. Accordingly, I do not believe that the quoting of venereal disease rates in themselves is of great significance unless the circumstances surrounding the accumulated data are clearly understood.

Gibson[1], commenting on the venereal disease situation in the Australian Army, reported that 85 per cent of the patients had been infected by nonprofessional or clandestinely encountered women, and only 15 per cent by professional prostitutes. It is now known that only 21 per cent of infections are acquired from professional prostitutes in this country. This is evidence of the fact that the "girl friend" is making the going a lot tougher for the professional of today. Also, many former professional prostitutes are now working in defense plants. This change about will make it correspondingly difficult for the public health officer to find the clandestine purveyor of gonorrhea or syphilis because she is not well known and is less likely to be reported as the source of the disease by the person infected. The brothel, in no matter what form it functions, does permit of certain control activities against the venereal diseases that are not possible among amateurs, albeit this is not an argument in favor of such houses.

The United States Public Health Service, in formulating a nationwide plan of venereal disease control, has created a program which might well be accepted as a model for other nations to follow. With funds allotted by Congress, to-

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gether with appropriations made by individual states, the campaign is being carried on. Vonderlehr[2] recently has reported that more than $19,000,000 has been budgeted by the Federal and state governments this year for venereal disease control, which is an increase of 15.7 per cent over last year.

The program is directed toward prevention and treatment of venereal diseases and is elaborate in scope. Several innovations, such as segregating of infected professional prostitutes in camps or hospitals, where they not only will receive treatment but also will be taught gainful occupations or trades, is but one part of the constructive effort now being made. The liaison between the law enforcement, the public health and the venereal disease control officials is functioning more efficiently than ever before, and its success is evidenced by the reduction in the rates of the diseases among the army personnel. The man or woman who is reported as the source of an actue infection is now brought in for examination and, when found to be infected, is given treatment in a more rapid manner than heretofore. The workers who are now employed in finding these contracts are not only trained social service workers but include former policemen, procuresses and persons who are familiar with night life in the large cities.

In Chicago there has recently been a striking demonstration of the ability to enforce control measures against the venereal diseases. Bundesen[3] has told of closing several taverns by posting signs thereon signifying that occupants of the building had gonorrhea or syphilis. Several soldiers reported that they had been recently infected by girls — now known as "call girls" — who frequented these places. The proprietor of a tavern was indifferent to the request of the health department that the "professionals" be brought in for examination until the sign was placed on his door and his source of income suddenly became materially curtailed. When he realized the potency of the health department in this regard, he not only brought in for examination the unescorted women who frequented his place but he has become an active campaigner among the tavern keepers of the city in urging them to demand that the prostitutes report frequently to the health department for examination. Although such testing does not eliminate completely the possibility that these woman will be infected, it does help to decrease it. I am heartily in agreement with Williams[4], who urges that the efforts at control of venereal disease be directed not only against the girls but against what he calls the "facilitators" — the panders, the tavern keepers, the persons, often commercial firms, who rent the buildings to the prostitutes, the bellboys and the taxi drivers. In this war, as has been said, the campaign against venereal disease among the civilians has been well organized and financed by the United States Public Health Service, and in most communities the venereal disease control officer has had excellent co-operation from the local health and police officials as well as from the medical services of the armed forces. The plan as it is functioning today is a striking example of the excellent work the combined health, police and military agencies are able to do in curtailing the spread of the venereal diseases.

The serologic survey of selective service registrants from the State of Illinois disclosed a syphilis rate of 22.5 per 1000. Indeed, this compares favorably with some of the southern states with large negro populations which had rates of 189, 154, and 133 per 1000 and compares unfavorably with some other northern states where rates of 4.3, 6, and 7 per 1000 were recorded. The syphilis rate of selectees for the United States as a whole was 18.5 per 1000 for white persons and 242 per 1000 for negroes.

The city of Chicago, with an incidence of syphilis of 24.7 per 1000 among the selectees, had the lowest rate of any of the five large cities in this country, and some of the smaller cities in Illinois did almost as well. For example: Alton had 34; Rockford, 30.3; Springfield, 27.7; and Danville, 25.3 per 1000 registrants. However, in spite of the efforts of the officials concerned with these diseases, since the start of the war the syphilis rate among civilians in this country has increased 21 per cent.

The army and navy have reported a striking decrease in venereal disease rates during the last three years.

I have observed for some years in this country that the curve of incidence of syphilis among civilians tends to parallel the economic situation. When money is prevalent, "good times" are frequent with an attendant increase in the incidence of syphilis; and when jobs are less

plentiful and hard to find, the incidence of the disease decreases.

The increase in syphilis among the nonmilitary persons is not confined to this country. Frazer,[5] the health officer of Liverpool, England, reported that, since the war began, syphilis had increased fourfold and gonorrhea had become twice as common in occurrence in the port areas and industrial towns under his control. A similar situation exists in Scotland[6] and Canada[7]. However, in contrast, in Germany[8] the reports for 1942 indicate a decided decrease in the incidence of syphilis among civilians. The reduction approximated 50 per cent but no explanation was offered for it. In this country there has been an increase of 53 per cent in the requests for serologic tests for syphilis but the increase has been due, in a measure, to premarital, prenatal and selective service demands.

On the basis of reports available, the state of Illinois will acquire 30,150 new patients with syphilis this year, of which number approximately 5,000 will be new or acute infections. In 1942, in Illinois, 28,675 cases of syphilis were reported. If the survey made by Howard and his co-workers[9] in Massachusetts prevails in this community, only 42 per cent of these infections will arise within the state, while 52 per cent will be attributed to immigration from surrounding states. Illinois will spend, in venereal disease work, this year, approximately $1,260,000, of which $465,800 has been appropriated by the Federal government. These funds will maintain 116 venereal disease clinics in this state and will provide for drugs, consultation service, serologic tests, education and training of personnel and maintenance of case finding and holding records.

I believe the attitude of employers prevalent at the beginning of the war toward employees who had syphilis was an unjust one; especially so when only a positive serologic test disqualified a worker for a job. The policy recently recommended to industry by a committee headed by Anderson[10] seems fair to both parties, namely; that an employee shall not work while in an infectious state; that he must take adequate treatment; that if he is manifesting the serious complications of the disease which increase the likelihood of his creating a hazard to himself, to his fellow workers or to the public, then employment should be denied him; that if the syphilis is latent or dormant he should be employed; that if his occupation increases the likelihood of his developing disabling manifestations, an occupational readjustment should be affected. And by the same token, the employer must not be subject to increased compensation costs as the result of syphilis, must be protected from interruptions of the work because of illness and must not suffer decrease in production and labor turnover as a result of disease of an employee. In discussing the question of syphilis among railroad employees some years ago, I emphasized the point that it was advisable for the railroad surgeon to know not only the employees who have syphilis but especially to know the type of syphilis each employee has. For example, railroad officials should know the result of treatment given an engineer who has neurosyphilis and should determine whether his employment should continue before, and not after, some error of judgment calls it to their attention.

I already have mentioned that while the syphilis rate among civilians of this country has increased 21 per cent since the war started, the rates in the army and navy have decreased. Lieutenant Colonel Turner[11] has reported that venereal disease rates of the army for the past three years are as follows: 1940, 42.5 per 1000; 1941, 40.5 per 1000; 1942, 37.7 per 1000; and for the first few months of 1943 it dropped to 25 per 1000. This compares favorably with the rate of 86.7 per 1000 of World War 1. Of even greater significance is the fact that the syphilis rate in the army of today is less than 5 per 1000. Turner, in his report, commented on the activities of the specialists in venereal disease control who have been assigned to large camps and commands and whose duties include instruction of the soldiers in venereal diseases, rooting out of civilian sources of infection and arrangement for adequate quarantine and treatment of persons who constitute such sources. In addition to receiving instruction in prophylaxis against venereal diseases, the soldier also has the opportunity to obtain prophylactic kits at cost (approximately 10 cents) and stations for application of prophylaxis are made available to him. There has been a marked decrease in the loss of soldier working hours from venereal diseases not only by this reduction in the incidence of the

diseases but also because the newer methods of treating gonorrhea and syphilis are so much more rapid than were the older methods, that the days of hospitalization for patients with these diseases are now presumably at a minimum. The Division of Preventive Medicine of the Bureau of Medicine and Surgery[12] reports that the venereal disease rate in the navy for 1942 is 29 per cent lower than for the previous year. In 1940 the rate was 80 per 1000, in 1941 it was 51 per 1000, and in 1942 it dropped to 36 per 1000. When the survey was limited to the continental United States the admission rate was found to be 22 per 1000. The rates for 1942 are the lowest in naval history.

The laws in regard to induction of the selectees who have syphilis have been changed recently so that now a young man who has syphilis which is evidenced only by a positive serologic test of the blood, and who has been adequately treated, will be accepted for the service. In the presence of active clinical syphilis, either early or late, a positive spinal fluid test or signs of the disease in the viscera, vascular tree or central nervous system, the candidate is not acceptable for military service.

The intensive treatment of acute syphilis has been tremendously stimulated by the war so that, at present, in a great many institutions the country over these new systems of treatment are undergoing thorough trial. Up to the moment it is not possible to forecast which of the systems now under survey eventually will turn out to be the most valuable. The object of search, however, is to find the method that gives the highest incidence of cure in the shortest time, with the lowest percentage of complications.

The enthusiasm for intensive programs of treatment was precipitated by the work of Hyman, Chargin and Leifer,[13] who eventually developed a technic for giving 1,200 mg. of mapharsen in five days by the twelve hour continuous drip method. They reported satisfactory results in 83 per cent of cases and a comparatively low rate of complications. Stimulated by this work, descriptions of a number of modifications have appeared in the literature, most of which have definite merit. Some of these newer systems which are now undergoing an intensive trial are briefly summarized as follows:

The *Eagle System,*[14] consists of the giving of three injections of mapharsen per week (by syringe) for periods of six or eight weeks (three schedules were originally employed). This system recently has been augmented by addition of intramuscular injections of bismuth.

The *Shaffer system* consists of giving one injection a day for five consecutive days of 180 mg. of mapharsen dissolved in 1000 c.c. of 5 per cent solution of glucose. Injection is by the drip method and approximately sixty to seventy-five minutes are required to give it. Three intramuscular injections of bismuth are given the first week and one injection per week for four weeks after completion of the course of the preparation of arsenic. The satisfactory results at present approximate 82 per cent.

The *Thomas or Schoch system*[15, 16] consists of multiple injections of mapharsen by syringe instead of by the drip method. It has been found practical to give 100 mg. of mapharsen twice daily for six days, or 100 mg. once daily for twelve days, while the patients are ambulatory.

The *Simpson-Kendell-Rose system*[17] consists of the use of fever therapy and mapharsen, and recent modifications now permit of giving the course in one day. The patient is given one session of ten hours of fever, with temperatures up to 105 to 106° F. in the fever cabinet, and during treatment he receives 120 mg. of mapharsen intravenously and 75 mg. of bismuth intramuscularly. This method, to date, is the most striking of the newer procedures and, up to the present, is offering an incidence of satisfactory results equivalent to the other methods.

These five systems of treating acute syphilis are enjoying intensive use in hospitals, army camps and venereal disease clinics sponsored by the United States Public Health Service and local health departments. The elimination of some of the complications of these treatments is at present as important as the evaluation of the procedures. The Chicago Intensive Treatment Center is probably the largest of these institutions and is at present using the Eagle, Thomas or Schoch and Simpson-Kendell-Rose systems in the treatment of patients with acute syphilis. As I have mentioned, it is to early to attempt to evaluate these methods today, but three years hence I believe the value of the procedures can be determined. Before then it will be possible

to estimate the failures and the complications, but at least three years, and preferably five, must elapse before worth-while appraisal of their actual curative values will be possible. From experience thus far it appears that 1,200 mg. of mapharsen, given by either the continuous drip method or by syringe, in five to twelve days, offers the highest incidence of cure and the lowest percentage of complications. Smaller doses and longer intervals between injections increase the failures, while larger doses in shorter periods increase the incidence of serious complications and death. The addition of intramuscular injections of bismuth to the course has, in my experience, increased the good results, with but slight addition to the time involved. To decrease the time of treatment from eighteen months under the old, so-called continuous system to one day under the Simpson plan is dramatic to say the least. I am in favor of employing a system for the treatment of early syphilis that entails the use of mapharsen and bismuth for perhaps six to eight weeks. With this plan the satisfactory results are equal to those of the very short methods and the rate of complications is minimized.

A significant factor which stands out when surveying the results of treatment of early syphilis by most systems is the similarity of the percentages of satisfactory results. Favorable results are reported in approximately 85 per cent of the cases in which treatment is by these new, intensive as well as the older, protracted methods. In other words, failure in approximately 15 per cent of cases has been a conspicuous feature of the reports in the literature. The reason for this rather consistent percentage of failures is not understood at this time, but failures may be attributable to an inadequate defense mechanism rather than to the specificity of the Spirochaeta pallida.

The value of the use of sulfathiazole as a prophylactic measure against gonorrhea and chancroid has recently been reported by Loveless and Denton,[18] and the army is now trying the method in the field. Arthur and Dermon[19] also called attention to the fact that the use of sulfathiazole previous to exposure not only is a materially effective preventive of gonorrhea but that it also seems to exert some influence on the character and appearance of the chancre of syphilis. The syphilis rate is apparently not influenced by the prophlactic use of this drug, but it is suggested that perhaps some change in the immunologic process may occur that alters the appearance, or inhibits the development, of the classical primary lesions of syphilis. This observation needs confirmation and calls for observation of larger groups of cases.

The army and navy may well be proud of the reduction in their venereal disease rates during the past three years, and especially of the low syphilis rate in the army of 5 per 1000. However, the 21 per cent increase among the civilian population of the United States does not justify the same feeling of pride. In fact the state of Illinois has shown an increase of approximately 30 per cent in the last two years. Many factors enter into the situation to account for the success of the army and navy program and for the failure of the citizenry to avoid venereal diseases. In the army, the educational programs, the value of prophylaxis, the isolation of camps, the reporting of the sources of infection, the teen age group, and the married men inducted into service are some of the reasons for the success of the efforts. In contrast, larger incomes, the immigration to congested areas, the moral laxity that accompanies such an upheaval as we are now undergoing and the conspicuous absence of information about, and the opportunity for learning the technic of chemical and mechanical prophylaxis are among the reasons why the venereal disease rates are increasing among the civilian population. Civilian public health officials (the United States Public Health Service is a military force in time of war) cannot influence any but the last of these factors, and I have been impressed with the lack of enthusiasm among them thus far in this war for a campaign to reduce the incidence of gonorrhea, syphilis and venereal ulcers. I am familiar with some of the factors that have curtailed the efforts of many enthusiastic venereal disease control officers when they attempted to institute prophylactic campaigns and stations or to distribute instructive literature on the subject. Those who object to these efforts base their arguments on the grounds of morals and vice rather than on those of public health and war influences. They admit that, in their minds, tradition and rule must prevail against dissem-

inating instruction on prophylaxis because, by such dissemination, immorality is encouraged. The increase of 21 per cent among the civilian population, where prophylaxis is not encouraged, and the decrease of almost 50 per cent among the military, where prevention of disease is encouraged by numerous measures and means, is a striking argument in favor of the army and navy procedure. It would seem to me that an exceptional opportunity is being missed to offer, at least to those civilians who seek it, such information as is available for the prevention of venereal diseases, and I personally feel that physicians are duty bound to supply such data.

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## THE PROBLEM OF TROPICAL DISEASES.

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All of you have in the past few years, heard the expression, "it can't happen here," when the danger of invasion has been brought up. America has been invaded by armed forces in the past, the first recorded invasion was by the Northmen about the year 1000 A. D. Following this invasion were succeeding invasions by the Northmen with settlements on the southern coast of Greenland, then came the invasions by the Spaniards and Portuguese beginning with the year 1492, followed later by the English, French, Dutch, Swedish and German invasions and settlements. Some of these invasions were peaceful landings, others were by armed forces. To use the expression of a writer, the invaders first fell upon their knees then fell upon the aborigines. Another invasion was by the negroes of Africa, brought over here against their will some in northern ships to work on southern plantations.

Today we are not concerned so much with armed soldiers invading our country but with our own soldiers returning from the great battlefields as carriers of germs of diseases that many physicians of this country have seldom if ever encountered, in other words with invading germs of tropical diseases.

It has happened here in the past that diseases have been brought to our shores and caused devastating epidemics. There was a close communication between the colonies in Greenland and Iceland for over three centuries, but after about the middle of the fourteenth century no more is heard of Greenland. It is believed that probably the devastating pandemic of bubonic plague in 1347 wiped out these colonies. The Danish government up to the outbreak of World War II was carrying on extensive studies of these early settlements including a study of the bodies exhumed from the cemeteries, to determine what lead to the extermination of these early colonists. Members of the faculty of the medical department of the University of Copenhagen have published reports of studies on these bodies, some of

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which were well preserved by the cold climate of Greenland.

America was the most healthy continent in the world before Columbus rediscovered it. There were no depopulated areas and no epidemics of American origin. Small-pox was brought to America early in the sixteenth century by the Spaniards. It was one of the diseases that decimated the Indians thru recurring epidemics. Hook worm disease was introduced by negro slaves from Africa. No gonorrhea, no rickets, no tuberculosis, no plague, cholera, typhus fever, measles, leprosy or proven syphilis was found. It is also interesting to note, there were few skin diseases or mental disorders. There has been some question in regard to yellow fever, malaria, typhoid fever, scarlet fever and diphtheria. Diseases introduced later are dengue in 1780 as described by Benjamin Rush, relapsing fever in 1844, and anthrax.

I mention these diseases to call to your attention that devastating diseases were brought to this continent in the past and gained a foothold and only recently some have yielded ground after intensive and expensive campaigns of eradication. One of the most recent parasites introduced is the Bothriocephalus latus, the fish tape worm. The natural habitat of this worm is the lakes of Finland and Switzerland, now it is found in some of our northern lakes.

I want to state here that our government is going to give to our armed forces the best care possible during illness, not only at the front but also after return to this country if needed, but you all know that some of these diseases are extremely resistant to treatment and tend to recur from time to time, and it has been the experience of some of us, particulary those who have had under our care some of the veterans of the Spanish-American war and the Philippine insurrection, that some of these diseases are extremely chronic and with their complications tend to recur from time to time.

Four men during the last quarter of the nineteenth century made epoch-making discoveries of immense importance to people living in the tropics and subtropical portions of the earth. In 1874 Patrick Manson discovered that the embryo filaria developed in a mosquito. David Bruce discovered the coccus of Malta fever in 1887; later in 1895 he found that the trypanosomes of nagana in cattle, and in 1903, that the trypanosomes of African sleeping sickness in man were both carried by the tsetse fly glossina palpalis. Ronald Ross in 1889 discovered that malaria was spread by an anopheles mosquito. In 1900 Walter Reed and his associates found that yellow fever was spread by a mosquito belonging to the aedes group.

It will be impossible to take up in detail all the different tropical diseases; all that can be done at this time is to consider the most important ones of this group.

What is meant by the term tropical diseases? In my opinion Sawyers definition is the most satisfactory, "A tropical disease is any disease as it behaves in a tropical environment. This environment is not definable in terms of heat and humidity alone. It is an environment compounded of special local conditions of climate, social make up of people, social and economic conditions, food materials and especially the arthropod vectors of disease and the animal hosts."

By far the most important of the tropical disease is malaria. This disease has the peculiar distinction of being caused by four different types of animal parasites. 1. The plasmodium vivax, the most common. 2. The plasmodium falciformis, the next in frequency but the most virulent as it not only causes the algid and comatose complications but also is believed responsible for black water fever. It is spoken of as estivo-autumnal malaria. 3. Plasmodium malariae, the cause of quartan fever. 4. The plasmodium ovale found on the west coast of Africa causing symptoms similiar to those of plasmodium vivax. All four respond to quinine, also atabrin and plasmoquine.

Of the eight species of anopheles found in the United States, two are responsible for most of the malaria seen in this country, they are anopheles quadrimaculati and anopheles maculipennis. The former is found in the east, east central and southeastern section of the United States; the latter is found on the west coast. The morphology and habits of the two are similiar.

Epidemiologically malaria may exist in three forms in a community. 1. As sporadic cases as here in our own community. 2. Endemic malaria as in certain places in the south. 3. Epidemic malaria. This occurs under certain conditions not only in the tropics but also in temperature zones.

In England before World War I, malaria was pactically unknown. Returning soldiers infected while in the service carried the gametocytes in their system and were responsible for several local epidemics. After the Spanish American war epidemics were reported in our country from places in the New England states and as far north as Duluth, Minnesota.

The problem of prevention is one of prompt treatment and unrelenting follow up of each case, as a gametocyte carrier in a community means an endemic focus. Neither quinine, atabrin or plasmoquine are really curative. Quinine will keep the parasite under control enabling the soldier to remain at his post for weeks and months but unhappily it does not kill off the parasite. Immunity has to develop in the human body in order to eradicate the parasite. The most dangerous malarial parasite is the plasmodium falciformis. This parasite is not as readily found in the peripheral blood as are the parasites of the other three forms of malaria. They have a peculiarity of sticking to the walls of blood vessels, particulary the capillaries of the internal organs and reticulo-endothelial system. The most bizarre symptoms may arise as coma simulating meningitis, dysentery resembling bacillary dysentery, hepatitis, pancreatitis, and involvement of the bone-marrow. Black water fever is associated only with the estivo-autumnal type of the disease. It is probably an anaphylactic phenomenon due to hypersensitivity to the toxins of the parasites.

Next to malaria in importance are the tropical dysenteries.

1. Bacillary dysentery. In 1898 Shiga isolated the Shiga bacillus, the most virulent of the dysentery organisms. In 1900 Flexner isolated the organism that goes by his name. Later Sonne isolated another organism that goes by his name. Today several different types of the above mentioned organisms are recognized, particularly the Flexner types. These three organisms have been found to be the cause of most of the epidemics of dysentery found in the tropics and may be responsible for epidemics in temperate regions also. In differential diagnosis bilharzia, flagellate and amoebic dysentery should be kept in mind as well as the salmonella group of bacilli, the staphylcoccus toxin diarrhoea, and water pollution diarrhoea all more common in the tropics.

The chronic form of bacillary dysentery may be most resistant to treatment, about twenty out of every one-hundred acute cases become carriers. The mucous membrane of the large bowel is inflamed, and edematous, and may be replaced by granulation tissue in ulcerated areas. In this type of dysentery it is well to keep in mind syphilis, carcinoma and certain chronic poisonings as mercurial poisoning, in making a diagnosis.

2. Amoebic dysentery usually comes first to mind when tropical dysenteries are mentioned. Actually there is more suffering in cases of bacillary dysentery and the epidemics occuring are more extensive, but amoebic dysentery may be more insidious. Carriers of entameba histolytica are most important in continuation of the disease. It is estimated that 5 to 10% of our population is already infected. With returning soldiers from the tropics this percentage may be greatly increased. The carriers may have no symptoms, or only occasional vague discomforts. These are the cyst passers that may be responsible for extensive epidemics particularly if they are food handlers.

In the tropics the disease is widespread, but it also occurs in temperate regions. It should be kept in mind that a carrier may harbor the amoeba histolytica for over fifty years without symptoms, or only vague feelings of discomfort at times, before becoming really ill. The amoeba histolytica not only involves the intestinal tract but may also attack the skin of the perineum and peri-anal region, also the skin surfaces around colostomy incisions, and liver abscess drainage wounds.

Chronic amoebic ulceration of the colon may also be responsible for remote effects as allergic symptoms, asthma, urticaria, neurasthenic states, low blood-pressure and circulatory asthenia. The ulcerations may favor invasions by secondary invaders.

Clinical cure may be effected but it is doubtful if total eradication of the ameba can be accomplished. Emetine is specific and very satisfactory results are seen where this drug is used judiciously.

Leishmaniasis is another very important tropical disease to be kept in mind. There are three types. 1. Kala azar, the visceral type of infection. This is found in India, Burma, China, Abyssinia, Sudan; occasionally in the Mediterranean area

of northern Africa and southern Europe, particularly southern Russia. Our American area of infection is Brazil, Argentina, Paraguay, and Bolivia. Insects, food and drink may carry the infection. Dogs are susceptible to the disease. The diagnosis is made by demonstrating the Leishman donovan bodies in smears, or cultures of the peripheral blood, glandular juice or from the liver pulp.

The symptoms particulary in the presence of malaria are confusing. An irregular fever is noted, there is enlargement of the spleen, anemia, leukopenia, emaciation, dysentery, and diarrhoea. Antimony is of considerable help in treatment.

2. A second form of Leishmaniasis is Oriental sore, the old world cutaneous type. Here again insects as sand flies may be the vectors. Diagnosis is made by demonstrating the parasite in the lesions. Berberine sulfate is injected into the edges of the sore, and if severe symptoms are present use antimony as in kala azar.

3. The American type of infection of the skin is called Espundia Americana. Here again insect vectors are responsible, particulary sand flies. Diagnosis is made by finding Leishmania Braziliensis in the smears or cultures from the sores. The treatment is the same as already mentioned.

Helminthic infestations. These are a big problem in the tropics.

Filariasis. This disease is due to a small round worm, the Wucheria bancrofti, found in tropical South America, Central America, the West Indies and Pacific Islands. The adults are found in the lymphatics and lymph glands. At night the larval worms are released into the blood-stream. The swollen legs and inguinal glands with elephantiasis of the legs are advanced stages of the disease. Finding the larvae in the blood-stream makes certain the diagnosis. After having seen the way the active larvae whip around the blood corpuscles you will never forget the sight. There is a small endemic area in the neighborhood of Charleston, S. C. Many varieties of mosquitoes carry the parasite especially the culex. Surgery is the treatment for the elephantiasis.

Hookworm discase is rife in the tropics and used to be common in some of our southern states. Cases are occasionally seen in hospitals here in the north. There are two types of worms seen, the old world type called ancylostoma duodenale, and the new world type, necator americana. The treatment is the same for both.

Another important group of worms infecting man are the flukes, also spoken of as schistomiasis and bilharzia. In this group are included the Bilharzia mansonia, prevalent in Egypt, Bilharzia hemetobia also found in Egypt and along the Congo river; and in the far east, the Bilharzia japonica. There are also a few other species. Not only is the intestinal tract involved but also other organs as the liver, kidneys, bladder, lungs and blood-stream may be invaded.

Onchoceriasis is found in Africa, Central America and southern Mexico. It is due to a worm, the larvae of which are carried by a species of gnat which serves as the intermediate host. A favorite location for these gnats to deposit the larvae is the scalp. Here nodules form containing the larval worms. They may migrate to various parts of the body as the eye, causing serious disorders.

Dracunculosis, Guinea worm disease. This worm is extensively prevalent in Africa especially Egypt; India and Brazil. The female develops in the subcutaneous and intermuscular tissues producing vesicles and abscesses. It usually migrates downward toward the foot and may be felt as a string under the skin. Infestation is by drinking water containing larvae.

The most important tropical diseases have been referred to; however there are a number of others that should be mentioned as cholera, granuloma venereum, Weils disease due to Leptospira icterohemorrhagiae, oroya fever due to Bartonella bacilliformis, pinta due to Treponema herrejoni, plague, rat bite fever due to Spirochaeta morsus muris, relapsing fever of which there are several different varieties, six of which will be mentioned, namely, the European type due to Borrelia also called Treponema recurentis, the three types in Africa, Borrelia duttone in Central Africa, in East Africa Borrelia kochii, in northern Africa Borrelia berberi. That found in India is due to Borrelia carteri, while that found in this country is due to Borrelia novyi. Trypanosomiasis or African sleeping sickness has already been mentioned. Yaws is duc to Treponema pertenue and yellow fever due to a filterable virus should also be mentioned, likewise meliodosis due

to Bacillus whitmori found in Burma and the Malay States. Practically all of these have complications that may persist and it would be well to brush up on these diseases that might be carried back to our shores, not only for the purpose of prevention but also for the purpose of doing everything in our power to aid those splendid men who have risked their lives to protect us in this dire emergency.

1007 Talcott Building

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## FUSOSPIROCHETAL TRACHEOBRONCHITIS

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AND
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Pulmonary suppuration is frequently complicated by a fusospirochetal infection. According to Pilot & Davis[1] pulmonary infections due to those organisms may be considered as definite clinical entities, associated with copious, foul expectoration, lung destruction, abscess formation or extensive bronchiectasis. However, bronchoscopic observations suggest that this association need not always be a paramount factor, and that the disease may be found in the nature of a chronic tracheobronchitis without the presence of gross anatomical changes in the broncho-pulmonary system. It is the purpose of this study to present the clinical features of fusospirochetal tracheobronchitis, to describe the bronchoscopic findings, and to discuss the therapy and results of treatment.

Sixty-nine patients with chronic pulmonary infections in whom the etiologic organisms appeared to be the fusospirochetal group are the basis for this study. The large majority of the patients were adults; there were 32 males, 37 females. Relatively few children, even with fairly extensive bronchiectasis, as revealed in other studies,[2] were found to have these organisms present in the tracheobronchial secretions.

The clinical features of the disease most closely simulate those of pulmonary tuberculosis. However, in the series special cases could be found which would give the general symptomatology of almost any chronic pulmonary condition. The duration of symptoms was three months to twelve years, with cough, loss of weight, a low-grade fever, fatigue and occasional hemoptysis as the most common symptoms. Night sweats were mentioned by most of the patients as having been present at some time during the course of the disease, but in two of the patients this symptom was so constant and severe that it became the most outstanding one. The low-grade elevation in temperature was frequently intermittent but occasionally was present for several months at a time. Dyspnea, chest pain, and wheezing were rarely noted.

As a whole the group presents relatively few physical findings since the more extensive, destructive types of lesions are eliminated from this series. Rales were found in the more severe cases, while poor oral hygiene or oral sepsis was noted in many. The nasal sinuses, always an important factor in pulmonary suppuration, did not constitute a definite part of this disease picture.

The bronchoscopic findings in this series consisted simply of those of a chronic bronchitis. The bronchial mucosa assumed the same color and general character of the mucosa of the mouth of a patient with gingivitis. The rather diffuse oozing of the mucosal walls on contact with the aspirator or the bronchoscope itself was further evidence of the similarity between the mucosa of the bronchi and the buccal mucosa in gingivitis. Mucopurulent secretion was generally present in small amounts, and it was not tenacious. The organisms were isolated from this secretion, bronchoscopically aspirated, or from smears taken directly from the bronchial walls. The diagnosis was established by an evaluation of the history, physical and bronchoscopic findings, and the bacteriologic study of the secretions.

*Bacteriology.* — The large numbers of fusospirochetal organisms found normally in the mouth are evidence that these organisms, under normal conditions, are saprophytes. However, it is well recognized that under certain conditions they may become pathogenic. This is especially true if a pyogenic organism is found in association with the fusospirochetes. Davis and Pilot[3] showed that the addition of a pyogen, particularly the streptococcus, greatly increases the severity and character of fusospirochetal in-

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fections. In this regard it is of particular interest to note that in almost all of our cases streptococcus viridans colonies were found in the material cultured from the bronchoscopically obtained secretions.

The search for the source of the infection and the character of its invasion through the trachea and bronchi has prompted much experimental work. Myerson[4] has demonstrated bronchoscopically the ease with which material in the mouth may be aspirated into the tracheobronchial tree. Smith[5] stressed this relationship in another manner, by illustrating with case histories the direct extension of the infection from the upper respiratory tract into the lungs. He further showed the manner in which the infection was acquired from one patient by another, through direct contact with laboratory material. Chalmers and O'Farrell[6] were able to produce a bloody type of bronchitis in a monkey by intrabronchial inoculation of material scraped from the gums and teeth of infected patients. The more extensive lesions have been produced experimentally in the same manner by many investigators[1,5,7,8] who also used scrapings from the gums of patients suffering from pyorrhea. Smith[9] states, "This observation leads naturally to the conclusion that broncho-pulmonary spirochetosis is probably the result of aspiration, from the mouth into the lungs, of the group of anaerobic organisms."

The character of the invasion opens a further interesting field of speculation and research. The association of gingivitis with avitaminosis is well known. According to Penta,[7] the incidence of infection from fusospirochetal organisms in experimental animals who have been on a vitamin C deficient diet is greatly increased over controls. The normal tissue barriers are apparently decreased and this may be a definite factor in patients with low-grade endobronchial infections.

*Treatment.* — The principal therapeutic agents in the treatment of fusospirochetal infections are the arsenicals. They should be administered promptly if maximum efficiency is to be obtained. Neoarsphenamine, sodium cacodylate, and mapharsen are all specific. They may be given in dosages and in series similar to those given in anti-luetic therapy, but in the use of neoarsphenamine, small doses of 0.2 to 0.3 grams, repeated at intervals of from two to four days, are generally sufficient. Some authors[10] indicate that larger doses are less efficacious than the smaller ones as the larger doses may be responsible for making the spirochetes arsenic-fast. Intravenous antimony and potassium tartrate may be used in especially resistant cases.[11]

A second factor which should be considered in the therapy of fusospirochetal bronchitis is the administration of large doses of vitamin C. This factor is based upon definite experimental findings in the etiology of the disease, as mentioned above, but its clinical application is somewhat difficult to evaluate. Smith[10] stresses its use in chronic trench mouth, whose etiologic organisms are the same as those under discussion. In addition, he advises the use of a high calcium diet.

A third therapeutic agent that has been used in the treatment of the patients herein reported has been autogenous vaccines. These have been used in patients whose bronchitis has been especially chronic, who have responded inconclusively to the administration of arsenicals. The most frequent organism used in the preparation of the vaccine has been the streptococcus viridans. However, many other organisms have been found frequently in the aspirated secretions and have been included in the preparation of some of the vaccines. These are pneumococci, micrococcus catarrhalis, and influenza organisms.

Active therapy includes postural drainage in patients who have a productive cough. Further, the importance of bronchoscopic aspiration of patients who have signs of bronchial obstruction must be stressed. Such signs consist of an elevation of temperature and night sweats. In 1924 Chevalier Jackson[12] discussed this therapy and established the diagnosis in several cases by direct smears made from bronchial ulcers during bronchoscopic inspection. In the two patients previously mentioned as having excessive, drenching night sweats, the night sweats stopped immediately following aspiration. In one, recurrence several months later ceased with a second thorough bronchoscopic aspiration.

## SUMMARY

1. Bronchoscopic examination of a series of patients with chronic bronchitis suggests that fusospirochetal organisms may be responsible for severe bronchitis with local and systemic symptoms, as well as for the more extensive destruc-

tive pulmonary processes with which they are generally associated.

2. The symptoms most frequently noted in a series of patients with fusospirochetal tracheobronchitis are chronic cough, occasional hemoptysis and night sweats.

3. The diagnosis is established by the history, the absence of acid-fast organisms in the sputum, and the demonstration of the fusospirochetal organisms in the bronchoscopically obtained secretions.

4. Treatment consists of the frequent administration of small doses of arsencials, the administration of vitamin C, of autogenous vaccines, and bronchoscopic aspiration if evidence of bronchial obstruction is present.

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DISCUSSION

Major F. B. Blackmar, Schick General Hospital, Clinton, Iowa: I should like to say a few things about this, particularly with reference to these organisms. Some years ago it was my good fortune to come across a patient with a pure fusiform and spirilla infection. Strange to say it was on the thumb and the patient was brought in to have the thumb amputated. Someone suggested that we take a smear. It was very foul. We found a pure culture of fusiform bacillus and spirilla. We tried to culture these organims, washed off the thumb with saline and injected the suspension into the testicle of a rabbit. In the beginning we had nothing but the fusiform bacillus. As days went on the bacilli became longer and longer, as seen in aspirations from the testicle. Finally we had a mixture of fusiform bacilli and spirilla. There has always been a question as to whether there were two organisms or one. I believed we proved that they are developmental forms of the cause organism.

We have seen several cases at my Station corresponding with this description. One occurred a couple of weeks ago, typical of this description, but there was a cough present before he came into the Army and we had to ship him out. Harvey Searcy has worked on fungus diseases in the lung since 1921 and is probably the nation's authority. He has made the statement that these tracheal infections often respond to thymol by mouth, and if you should have a case that does not respond to neo-arsphenamine this should certainly be tried. Recently he reported a series of cases of tuberculosis in an insane asylum, in which thymol by mouth was given with apparently marked improvement.

Dr. Paul H. Holinger, Chicago (closing): I have nothing to add except to thank Major Blackmar for his description of the bacteriology.

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# ACUTE AND CHRONIC HEPATITIS (CIRRHOSIS)

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Cirrhosis of the liver is the end result of a chronic inflammatory or degenerative process, the duration of which is not known. Indeed its very existence is usually not suspected until the late manifestations occur. In the so-called Laennec or portal cirrhosis jaundice is notoriously late in its appearance; in biliary cirrhosis on the other hand jaundice appears relatively early. Jaundice is the outstanding symptom of hepatic disease but it does not provide a criterion of the severity of the process. In extra hepatic biliary obstruction the jaundice may be very intense yet the hepatic parenchyma be in good condition; conversely in portal cirrhosis the jaundice is absent or slight when considerable injury of the liver is already present. Portal obstruction as evidenced by ascites, the presence of dilated collateral veins, or hemorrhage is a late manifestation. In acute intrahepatic disease, however, the severity and duration of the jaundice do provide a rough gauge of the condition of the parenchyma of the liver.

Acute hepatitis usually presents the clinical picture of catarrhal jaundice. This disease once ascribed to "catarrh" of the biliary ducts with mucus "plugs" in the larger ducts, is now known

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to be a true hepatitis with inflammatory, degenerative and necrotic changes in the parenchymal cells of the hepatic cords[1]. The clinical picture of catarrhal jaundice occurs in two groups of cases: (1) those due to an infectious process, and (2) those attributable to a toxin or poison. In the infectious type the identity of the etiologic agent is not yet completely established. The disease may occur in a mildly epidemic form[2], but cases are found frequently in individuals not known to have been in contact with other patients. It will be recalled that the medical corps of the United States Army has recently had an extensive and unfortunate experience with jaundice occurring in soldiers approximately three months after the injection of yellow fever vaccine[3]. The British had previously had a similar experience and had concluded that the jaundice was due to a virus present in human serum which had been added to the yellow fever vaccine. The vaccine used in the United States had been prepard with human serum also. Apparently in both countries the use of vaccine without human serum was not followed by jaundice. It was concluded, therefore, by some workers, at least, that the jaundice was due to a virus accidentally introduced into the vaccine with the human serum. Further evidence that catarrhal jaundice may be produced by a virus present in certain human sera is to be found in the recent report of 7 cases occurring at intervals of 1 to 4 months after blood transfusions[4].

As is well known catarrhal jaundice may run a clinical course of only a few days but more frequently several weeks or even months may pass before it disappears completely. The pathologic picture is that of diffuse parenchymal injury. The following case report is illustrative:

The patient (G.V., Unit No. 306569) a female 54 years of age entered the Billings Hospital April 7, 1943 complaining of jaundice of one week's duration; loss of appetite, weight (16 lbs.) and strength for 6 weeks. The skin was markedly icteric. A mass in the right upper quadrant was interpreted as distended gall bladder. The van den Bergh test performed on the serum was directly positive. The quantitive van den Bergh test disclosed a serum bilirubin of 11.35 mg. per cent. The prothrombin time was normal. Operation was performed April 8th. The gall bladder was not distended and did not contain stones. The biliary ducts, the ampulla of Vater, and the pancreas were examined by inspection and palpation and were found to be normal. A biopsy of the liver was made. Following operation the patient made an uneventful convalescence. The jaundice gradually subsided, the serum bilirubin being normal on May 7th; the appetite and strength returned. Histologic study of the material obtained by biopsy disclosed an intense cellular infiltration (about equal numbers of neutrophilic leucocytes and lymphoid cells with sparse eosinophiles) in the portal zone. The hepatic structure was greatly disturbed with injury to the hepatic cells evidenced by the great variation of the staining of both the cytoplasm and the nuclei. There were no zonal areas of necrosis; the total picture was a mixture of degeneration and regeneration of parenchymal cells. There was no dilation or occlusion of the bile ducts.

This case, then, is a typical instance of acute catarrhal jaundice, presumably of infectious origin. Pathologically there is both inflammation in the portal areas and evidence of injury to the cells in the hepatic cords as shown by signs of degeneration and of regeneration in the cytoplasm and in the nuclei of the cells. The severity of the hepatic injury in catarrhal jaundice is extremely variable as is shown by the extremes in the clinical course, the picture ranging from transitory icterus to acute yellow atrophy with cholemia and death. The occasional appearance of a fatal necrosis has been recognized in epidemics of the disease. The recent experience of th Army bears further testimony to this possibility.

Precisely the same clinical syndromes can be produced by certain hepatic poisons such as chloroform, arsenic, phosphorus, cinchophen, neocinchophen, trinitrotoluene, etc. In war time among munition workers trinitrotoluene jaundice is not infrequent. The problem was carefully studied in this country during the first world war[6]. It has received considerable attention in England[7] during the present conflict and is now concerning the physicians in charge of the health of the workers in our arsenals. The mortality rate is between 25 and 40%. In 1936 Dr. Woodall and I[5] collected a series of 191 cases of jaundice following cinchophen or neocinchophen. The great majority of such intoxications are not reported and all too frequently are not recognized as due to a poison. The mortality rate seems to be between 40 and 50%. Pathologically there is widespread necrosis of hepatic cells. If recovery ensues the liver may return to a normal state or cirrhosis may develop. The following case reports are illustrative:

A young housewife (V.T., Unit No. 123646) 36 years of age entered the Billings hospital March 9, 1935 with jaundice of three days' duration. Nausea,

vomiting, headache, and malaise had appeared two days before the jaundice. The physical examination was not remarkable except for the jaundice. The vanden Bergh test was positive, a very strong immediate direct reaction being obtained. The serum bilirubin was 3.2 mg. per cent on admission and rose to a peak of 15.2 mg. per cent on the 29th. The malaise and lack of appetite persisted until about the first of April when they began to disappear as the jaundice waned. By the middle of May the icterus was gone and the appetite somewhat improved. The course, on the whole, was that of catarrhal jaundice. It was known, however, that the patient had taken 5 seven and a half grain tablets of cinchophen since the previous Christmas, three of them in the two weeks before admission to the hospital.

In the following case the course of events progressed more rapidly and to a fatal termination:

The patient, (R.B., Unit No. 35540), a female 43 years of age entered the Billings hospital March 15, 1931 deeply jaundiced and comatose. Death occurred 3 days later. The history given by the family was to the effect that jaundice had first been noted about 10 days before admission. Unusual drowsiness developed 4 or 5 days later progressing to stupor and coma about 20 hours before hospitalization. For 10 years the patient was said to have suffered from "biliousness" or "dyspepsia" but without jaundice. No definite diagnosis had been made. The patient had had recurring attacks of arthritis for four years for which she had taken large amounts of aspirin. For six months prior to admission she was known to have consumed large doses of cinchophen. Autopsy disclosed an acute toxic necrosis of the liver (830 gms) with marked red and yellow atrophy. Histologically there was extensive necrosis with disorganization of the remaining hepatic cords.

In the following case the clinical manifestations were somewhat less dramatic and the hepatic process more chronic, or perhaps subacute, with fibrous tissue proliferation, a toxic necrosis and cirrhosis:

The patient (N.B., Unit No. 82635), a female 75 years of age entered the hospital May 17, 1933 for reduction of a fracture of the neck of the left femur incurred in a fall three days earlier. A faint icterus was noted. The patient gave the additional history that because of a chronic arthritis she had taken about 100 five grain tablets of cinchophen in the 3 months prior to admission. In spite of a moderate ascites the patient was placed in a body cast. The icterus index on the 19th, 22nd and 29th of May was 25, 25, and 21 respectively. Hematemesis occurred on the 27th followed by death on May 30th. Autopsy disclosed a subacute toxic necrosis of the liver with focal regenerative hyperplasia and early cirrhosis. (Wt. 650 gms.) The abdominal cavity contained approximately 2 liters of ascitic fluid. Histologically nodules of disorganized hepatic cells alternated with regions of necrosis and were surrounded by broad bands of connective tissue containing many small blood vessels and numerous bile ducts.

It seems clear that if the destructive process were somewhat less marked and perhaps continued for a longer period of time, the clinical picture, and, indeed, the pathologic picture might be that of the typical portal cirrhosis. It would seem probable therefore that just as necrosis of the hepatic cells may be brought about by various infections and poisons, so the subsequent cirrhosis may result from varied causes. It does not seem possible, however, to relate the majority of cases of portal cirrhosis to known hepatic infections or poisons. Clinicians have, of course, for many years looked upon alcohol as the toxic agent. There is considerable support for this view. Fleming and Snell[8] obtained a history of alcoholism in approximately half of their patients of portal cirrhosis with ascites. However, alcoholism and syphilis together, including hepatic injury from antiluetic therapy probably do not account for more than 60% of the cases of portal cirrhosis. Other and at present unknown intoxications or infections or vitamin deficiencies probably account for the remaining 40%. The relationship between the pigmentation of hemachromatosis and cirrhosis is not known nor is their cause understood. The same is true of the peculiar association of cirrhosis and progressive lenticular degeneration seen in Wilson's disease.

In biliary cirrhosis the process is different and yet similar for there is evidence in both the primary non-obstructive type of Hanot and in the obstructive type of Charcot of cholangitis or pericholangitis with degenration and regeneration of the parenchymal cells and also of the bile ducts and capillaries. Cirrhosis represents chronic disease; cellular degeneration and necrosis result from a more acute process and are at times superimposed upon the chronic form. In the rare xanthomatous biliary cirrhosis in which the hepatic disease is associated with xanthomatous, hypercholesteremia and lipemia, the basic factors are not at all clear[9].

The clinical picture of cirrhosis requires little discussion. In the portal type, the diagnosis is not usually made until the manifestations of increased portal pressure appear, i.e., ascites or hemorrhage from gastric or esophagea varices. The spleen is always enlarged and usually is palpable once the ascetic fluid is removed. The liver itself is frequently enlarged, but may be quite small. If palpable, its consistency is no-

ticeably increased. Jaundice is usually neither an early nor a marked symptom altho terminally it may be quite intense. In some instances the jaundice and cholemia appear without ascites. In biliary cirrhosis the syndrome is that of chronic jaundice persisting for years with enlargement of the liver and spleen. Ascites appears only in the terminal phase. The greatest diagnostic problem in biliary cirrhosis is the determination of whether the process is entirely intrahepatic (Hanot) or secondary to an obstruction, such as stone, in the extrahepatic ducts.

*Treatment*: The therapy of acute and chronic hepatitis includes first the elimination of the cause. There is no specific chemotherapy for the primary hepatic infections. There is no effective antidote for the hepatic poisons although encouraging work on the arsenicals is in progress. The persistence and indeed the extension of the necrotic process for weeks or months after the discontinuance of the poison is noteworthy and distressing. Jaundiced patients should be at rest. The diet should be adequate if possible, preferably high in carbohydrate, moderately high in protein and low in fat. The hepatic cells need both glucose and protein.[8,9,10,11] If the patient is unable to maintain an adequate caloric intake, glucose should be given intravenously. It should be noted, however, that the oral method of administration is preferable. Multiple vitamins should be given, particularly the B complex and K. Ascites initially may respond somewhat to the mercurial diuretics, but as the plasma proteins drop the effect decreases and vanishes. In fact Fleming and Snell concluded that on the whole diuretics probably do more harm than good except in selected cases. Paracentesis should be performed when necessary. Omentopexy has not proved worth while. Splenectomy, likewise, has not proved of value in the treatment of bleeding varices. At present the most hopeful procedure is the injection of sclerosing solutions into the dilated esophageal veins thru the esophagoscope.

The prognosis in both acute and chronic hepatitis is notoriously hazardous. The appearance of coma is a very bad sign indeed, but recovery may occur. Ascites is an ill omen for Fleming and Snell found the average duration of life in 158 cases of portal cirrhosis with ascites to be 12.9 months. However, in their total series of 200 cases 42 had survived for an average of 45.5 years and were either much improved or clinically well. Massive hemorrhage is a very serious complication. Jaundice of several months duration is usually a bad sign for it indicates continued and progressive inflammation, cellular injury and degeneration from which recovery is difficult.

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DISCUSSION

Dr. Clarence F. G. Brown, (Chicago): Dr. Palmer's presentation has been most interesting. Although much can be done for acute liver injury, therapeutic efforts for chronic liver insufficiency have yet to be of more than palliative value.

Certain phases of investigative activity, however, do seem to indicate some promise of constructive therapy. Ravdin and his co-workers have emphasized the need for substances other than carbohydrates in order to facilitate maximal regeneration of damaged hepatic tissue. Although the studies of this group are by no means complete, low fat, high protein and high carbohydrate diets are of greater value than high carbohydrate intake alone, especially in reducing high lipid content of damaged livers. Heretofore, our lab-

oratory and clinical impressions have been at diverse ends. Clinically, we have felt that patients with liver damage tolerated proteins poorly, whereas Whipple's studies have long indicated the value of high protein intakes in experimental animals.

A second phase of activity which gives equal promise of being of therapeutic value is the work of several groups, including Gibson and his co-workers, who have been preparing various types of protein from human serum and plasma, suitable for intravenous administration in large doses. Although primarily intended for use in the treatment of shock, human albumen may possibly be a helpful substance in treating individuals with cirrhosis of the liver. The hypoproteinemia and reversal of the albumin-globulin ratio are well accepted criteria of liver damage and our new found ability to alter these abnormalities may be effective in treatment. Ultimately, non-toxic amino acid solutions may be developed for intravenous use, which will be effective in altering the plasma proteins. At present such preparations that are available, although relatively not toxic, have little effect on the plasma proteins.

There remains much in the laboratory — work which has been done on animals — which cannot be appropriately transposed and applied to human beings. Further analytical studies, such as presented by Dr. Palmer, do much towards clarifying problems in the physiology of the human liver.

Dr. Frank DeTrana (Chicago): It is my opinion that peritoneoscopy is a good aid for the investigation of liver disease, particularly in view of the fact that biopsies may be obtained from the liver by this means.

I feel that cases of cirrhosis with ascites, where the patient is to be tapped, could be better done with the peritoneoscope. One can see the pathology. Perforation of bowel or stomach is possible with an ordinary trocar. It is less likely to be overlooked if the peritoneoscope is used.

Peritoneoscopy is an excellent means of confirming a diagnosis of cirrhosis.

I. F. Volini, M. D. (Chicago): I noticed that Dr. Palmer included the sulfonamides in the toxic substances that can produce liver damage. There are approximately five thoroughly reported cases in the literature and I have studied them carefully and I am not convinced of the unequivocal culpability of the sulfonamides in the production of damage to the liver.

Furthermore, I have had an extensive experience in the therapy of patients with serious liver damage in the course of pneumonia, many of these patients with ascites, with severe pronounced advanced cirrhosis, where we have treated them with the sulfonamides and I have not seen any patient damaged by this therapy.

In addition, patients with jaundice that I have felt was on the basis of an infectious etiology, — cholangeitis, — I have not hesitated to employ the sulfonamides in the therapy and have seen improvement from this type of treatment.

So that I think at the present time there is not sufficient evidence to indicate that the sulfanomides do produce damage to the liver, acute, subacute or chronic.

Most of the patients that appear with signs of liver damage in the course of therapy by the sulfonamides are suffering from diseases which in themselves are frequently associated with evidences of hepatitis.

Now a fairly large percentage of patients with pneumonia do have jaundice and many of the infectious septicopyemic manifestations that are associated with jaundice. And when such patients are treated with sulfonamides, they subsequently succumb, — not from the sulfonamides but I believe from the septicopyemia and from the effects upon the life of the infectious process.

Closing discussion of Walter L. Palmer, M. D. (Chicago): I am indebted to all the discussants for their remarks, — indebted to Dr. Brown for filling in the details of treatment which I had omitted or had no time to include.

I am sure that we all envy Dr. DeTrano's experience with the peritoneoscope. It would be a nice instrument to have available for the study of the external appearance of the liver, perhaps for biopsies also, in such instances.

I am greatly interested in Dr. Volini's remarks in regard to the sulfonamides. I had not had an opportunity to study the five cases which he mentioned that have been reported in the literature and am glad to hear his interpretation that perhaps there is some other explanation for the jaundice than the sulfonamide.

The question has just been asked me in regard to the role of chronic dietary indiscretions and of vitamin deficiencies in production of cirrhosis. It seems to me we have little evidence upon which to base a statement from the clinical point of view. It may well be that dietary indiscretions are productive of liver injury. Perhaps it is even more likely that dietary deficiencies are productive of injury.

We do know that in experimental animals, cirrhosis of the liver has been produced by a deficiency of various factors of the B complex. This is, I think, one of the most attractive leads in the field of hepatic cirrhosis.

Thank you very much.

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It seems there was once a snail who started to climb the trunk of a cherry tree one raw cold morning in January.

As he inched painfully upward, a wise-guy beetle stuck his head out of a near-by crack and said, "Hey, buddy, you're wasting your strength. There ain't any cherries up there."

But the snail kept right at it. "There will be when I get there," he said.

—Printers' Ink.

## POINTS TO NEED OF PREVENTING LAXITY IN WARTIME MANUFACTURING OF DRUGS

The manufacturers of drugs and medicinals must exert all possible effort to maintain and improve their methods of product control, *The Journal of the American Medical Association* advises in its February 5 issue. *The Journal* says:

"Apparently the circumstances created by the war have produced some relaxation of standards and control procedures established to insure the identity, purity and potency of medicinal materials. In recent months the Chemical Laboratory of the American Medical Association has found serious discrepancies between the labeling and the actual contents of materials submitted by several drug manufacturers. Each instance has been called to the attention of the manufacturer concerned. The public, the physician and the pharmacist depend in large measure on the manufacturer of pharmaceuticals for many finished dosage forms of drugs which, experience has shown, can be provided efficiently by modern mass production methods. Possible loss of life or wasted man-hours of work, resulting from faulty dosage traceable to mislabeling, cannot be tolerated.

"The cooperative efforts of physicians, pharmacists and manufacturers of pharmaceuticals have resulted in the adoption and constant improvement of criteria designed to facilitate accuracy in prescribing, dispensing and preparing of drugs. Such criteria are embodied in New and Nonofficial Remedies, in the Pharmacopeia of the United States and in the National Formulatory. Ultimate responsibility for marketed dosage forms of drugs, such as ampules, tablets and suppositories, lies with the manufacturer. The physician and the pharmacist must be able to depend on the labeling statements of such products, particularly with regard to potency and identity. The integrity of many manufacturers justifies this trust; if such trust is betrayed there exist punitive legal restrictions. There can be no positive guaranty that error may not occur in the processes involved in the transformation of raw materials into finished medicinal products. Careful control measures and constant vigilance by the manufacturer will minimize dangers inherent in false identity, low purity or wide variation in potency of products employed to maintain or restore health.

"The personnel and physical equipment of all manufacturing organizations in the United States are under constant stress. Manufacturers of drugs and medicinals have not been exempt from the loss of trained workers and from the necessity for full utilization of all available machinery in their tremendous job of providing adequate supplies of medicines for the armed forces and for the public. Nevertheless manufacturers of pharmaceuticals need to scrutinize and steadily improve their methods of product control."

## OUR PROFESSION

By Oliver Wendell Holmes

*Written for and read at the meeting of the Massachusetts Medical Society in* 1858

As Life's unending column pours
Two marshalled hosts are seen.—
Two armies on the trampled shores
And Death flows black between.
One marches to the drum-beat roll,
The wide-mouthed clarion's bray
And bears upon its crimson scroll
"Our glory is to slay".
One moves in silence by the stream,
With sad, yet watchful eyes,
Calm as the patient planet's gleam,
That walks the clouded skies.
Along its front no sabers shine,
No blood-red pennons wave;
Its banner bears the single line
"Our duty is to save."
Though from the Hero's bleeding breast
Her pulses Freedom drew,
Though the white lilies in her crest
Sprang from that scarlet dew,—
While Valour's haughty champions wait
Till all their scars are shown,
Love walks unchallenged through the gate,
To sit beside the Throne!

## GOOD REASON

The Army psychiatrist at the induction center eyed the prospective new soldier suspiciously.

"What do you do for your social life?" he asked the GI prospect.

"Oh," the man blushed. "I just sit around."

"Hmmmm, don't you ever go out with the girls?"

"Nope."

"Don't you have any desire to go with girls?"

"Well—sort of——"

"Then why don't you?" asked the doctor pointedly.

"My wife won't let me."

# Industrial Health

Committee On Industrial Health — Frederick W. Slobe, Chm., 2024 South Western Ave., Chicago, Frank P. Hammond, H. A. Vonachen, R. I. Barickman, C. O. Sappington, Milton H. Kronenberg.

## INDUSTRIAL PHYSICAL EXAMINATIONS*

Approved by the Council on Industrial Health, American Medical Association

### PURPOSE

The purpose of industrial health programs is to promote and maintain the physical and mental welfare of all industrial employees. Physical examinations in industry are a means to this end.

Specifically, the objectives of industrial physical examinations are:

1. To facilitate placement and advancement of workers in accordance with individual physical and mental fitness.
2. To acquaint the examinee with his physical status and to assist him in improving and maintaining personal good health.
3. To safeguard the health and safety of others.
4. To discover and control the effects of unhealthful exposure.
5. To promote cooperative support and understanding of industrial health practices by employer and employee alike.

Unjust or questionable exclusion from work through improper application of the findings on physical examination in industry is against the public welfare and contrary to sound industrial health principles.

### SCOPE

Industrial physical examinations should include:

1. Past medical, family and occupational history.
2. Physical findings.
3. Personality appraisal.
4. Laboratory data.
5. Summary and recommendations.

### GENERAL PROCEDURES

Since placement of the worker in suitable employment is an important objective of industrial physical examinations, the examiner will obtain best results only when he is familiar with the industry he serves. Medical inspection of the plant or industrial premises at regular intervals is essential to an adequate physical examination program as well as in other aspects of industrial hygiene.

Physical examinations in industry are classified under two major headings.

1. Preplacement examinations of applicants for employment.
2. Periodic reexaminations (regular or special).

In either case the examination should be complete.

The examination should be conducted by the physician himself, except such routine procedure as can safely be assigned to trained assistants. The examinee should remove all clothing in a private room. Special arrangements and a nurse in attendance are necessary in examining women employees.

### EQUIPMENT

Physical examinations will be facilitated if the following equipment is available:

Examining table
Stools, chairs and couch
Mirror
Screen
Scale and measuring rod
Metal measuring tape
Spotlight
Distant and near reading cards
Color sense testing cards
Nose and throat mirror
Transilluminator
Blood pressure instrument
Luer syringes (2 cc. and 10 cc.)
Thermometer
Dynamometer
Centrifuge
Microscope
Stethoscope
Ophthalmoscope
Blood vacuum tubes
Otoscope
Reflex hammer
Rubber gloves and finger cots
Tuning forks
Hemoglobin outfit
Urinalysis equipment
Garment racks

*The Journal of the American Medical Association October 30, 1943, Vol. 123, pp. 557 and 558.

## RECORDS

*Content.* — No single form has been devised to suit all requirements. The accompanying example is a composite of many used successfully in industry. Regardless of form, the records should contain.

1. Identification data: name, address, date and place of birth, race, sex, marital status, clock or social security number, and in certain circumstances photograph and finger prints. Some industrial physicians include name and address of next of kin.

2. Past medical and occupational history. Although details may be elicited by assistants, the importance of significant past health experience should be evaluated by the physician himself.

3. Physical findings:

(a) Preplacement examination. The attached form is designed for preplacement physical examination. Clarity and uniformity of expression are desirable. Variation in procedure will depend on specific industrial exposures and special job requirements. Examination for transfer to other work or on return to work after prolonged absences are essentially preplacement in character.

(b) Periodic examination. Reexamination should be conducted in the same detail as the original preplacement examination survey. The recommended form can be readily modified to allow for reexamination and to meet special requirements. General principles are fully described in "Periodic Health Examination — A Manual for Physicians," Chicago, American Medical Association, 1940. Repetition of physical examinations must be determined by the physician in charge, based on his original examination and the nature of the industrial environment.

### INDUSTRIAL PHYSICAL EXAMINATION

Employer City State
Name Address Clock No.
Age Race Marital Status Sex Social Sec. No.
Personal Physician Next of Kin
Personal and Family History:
Immunization Record
Occupational History:
Physical Examination: Date Examiner
Height Weight Chest Measurement {Inspiration / Expiration}
Temperature Pulse {Resting / After Exercise} Girth
Blood Pressure Posture Musculature Nutrition
Skin Glands Hair Scalp
Vision { Distant {R. / L.} Corrected {R. / L.}
Near {R. / L.} Corrected {R. / L.}
Color Sense Depth Perception Eyegrounds }
Hearing {R. / L.} Nose-Throat Tongue
Tonsils Neck
Teeth Gums
Lungs {R. / L.}
Heart
Abdomen Hernia
Genitalia Rectum Prostate
Spine
Joints Reflexes Hands Feet
Dysmenorrhea
Laboratory Data: Date Examiner
Urine:
Appearance Specific Gravity Albumin Sugar Sediment
Blood: Hemoglobin Smear Sedimentation Rate
Wasserman Kahn Kline
X-Ray: Chest Other
Personality Data:

Appearance {Neat / Careless / Slovenly}
Temperament {Aggressive / Quiet / Cooperative / Noncooperative}
Intelligence {Quick / Average / Dull}

Comparative Schooling {Advanced / Average / Retarded}
Summary {High / Medium / Low}

Summary and Recommendations: Code

4. Personality data. Observation of temperament, personality and significant nervous or mental manifestations should be a correlated part of a complete examination. The brief outline suggested in the form has been used in practice with good results. Comparative schooling refers to the level of education attained in comparison with other children in the family.

5. Laboratory data. Urinalysis, hemoglobin determination, blood test for syphilis, chest x-ray examination, differential blood smear and blood sedimentation rate are employed in industry in about that descending order of frequency.

6. Summary and recommendations.

*Coding.* — Usage varies in coding or rating physical and mental status, but the common intent is to classify examinees in one of the following groups:

A. General approval for all work.

B. Approval for placement under medical supervision.
   1. With limited physical exertion.
   2. In nonhazardous work.
   3. With orthopedic defect.
   4. With defective vision.
   5. With defective hearing.
   6. With neuromental handicap.

C. General disapproval for any work.

From the public and industrial health standpoint the only absolute bar to immediate employment in ordinary occupations should be communicable disease, psychosis or serious disabling injury or disease. Other consideration related to employer liability, workmen's compensation, factory acts and health codes must be determined separately for each jurisdiction.

*Preservation and Use.* — The examining physician may properly put information derived from records of industrial physical examination to the following uses:

1. All major findings should be discussed with the employee, with emphasis on the importance of obtaining immediate and adequate medical care.

2. A transcript may be supplied to the employee's personal physician or to other official community health agencies on consent of the employee.

3. The employer should be given information in accordance with the suggested code described in this report to facilitate placement or promotion. A special simple form can be devised for this purpose. The employer should especially be notified of any condition or disability thought to be caused by faulty work environment.

4. Governmental agencies such as courts, workmen's compensation commissions or health authorities should be supplied with information on legally enforceable official order.

In all other respects the confidential character of physical examination records should be rigidly observed and access should be granted only on request or consent of the examinee, preferably after preliminary discussion with the examining physician.

Suitable filing equipment and training of personnel should be maintained for the safe keeping of all medical records in the medical department.

### PERSONNEL

Physical examination is an important service of an industrial medical department having regular medical staff supervision. Where considerable numbers of examinations occur, nurses, technicians and clerks are helpful in securing and recording data in routine procedure. They require training which should be accepted as a special responsibility of the medical director.

In small plants, employers customarily make arrangements with individual examiners. A modification of this practice is to secure the services of an examiner from a panel of physicians approved by the county medical society for services of this kind.

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## THE PEORIA PLAN FOR HUMAN REHABILITATION

*A physical handicap is a difference, possessed by some persons, which, though limiting physically, need not limit vocationally.*

### A COMMUNITY LOOKS AHEAD

Here is a story of a city-community response to a vitally important situation. The problem of returning the individual handicapped through military service, accident or illness, to a life as nearly normal as possible is here recognized as an inevitable community responsibility. Under the impetus of a mounting wartime casualty list, resources have been marshalled to smooth the way for human rehabilitation within the community.

The community of Peoria, Illinois, housing more than 200 diversified commercial and industrial establishments, responded to the challenge of this problem. Civic agencies, under the original impetus of local industry acting through the Peoria Manufacturers' Association, have voluntarily brought forth "The Peoria Plan for Human Rehabilitation." The return of the physically handicapped from military to civilian life presents a problem which will test American ingenuity equally as much as its economic and political questions. Unless a well organized program is prepared in advance, we shall be faced with returning disabled men being forced to wait for jobs, with each day's delay increasing their resentment, their mental depression, and their fear of depending upon charity. National leaders who have become acquainted with this plan feel that it has great merit. Peoria's hope is that other communities over the nation may emulate its action, take counsel and courage from its pattern, and institute a similar humanitarian project at the earliest possible moment.

Anyone who has gone through a modern government hospital has come away a saddened man; for the modern miracles of science, the much heralded blood plasmas, and the "sulfa" drugs, have worked their scientific miracles well in many cases. Stretching corridors of rooms are filled, even now, with once-strong boys and men, maimed, deformed, and blinded — the advance guard of the Armed Forces that will return from the battle areas in a steadily increasing stream as the climax of this global war nears.

These boys and men who are able to again take their place in useful positions in society, will return "home." They will look quite naturally to their old jobs. This poses a problem on local employers and through them to the community as well. Without minimizing in any way the fine purpose of government gratuities, none of these can fully compensate for the stimulus of familiar contact and the atmosphere of the "old job."

The Peoria Plan for Human Rehabilitation is unique because the many employers in the Peoria area were organized and made ready to accept the physically handicapped before their return. Usually, the intake groups are forced to approach employers with a plea for opportunities for the persons with physical handicaps.

But business, at first blush, sees an "impasse." "We'd like to use these people," but the main question is, "HOW can we? What can they do? Will they endanger other employees or themselves? In other words, will your high-sounding plan WORK?"

The answer is to be found in the work experience of the Caterpillar Tractor Co., a bustling, war-busy plant employing 18,000 men and women. From this busy factory sprang the original idea for "The Peoria Plan." Its undeniable success there brought ministers, educators, businessmen and social workers in a steady stream to establish the larger community effort. Some 18 months ago "Caterpillar" realized that some of the 4,000 to 5,000 employees on military leave would return from the war suffering from physical handicaps. In facing this problem the company could draw upon its many years of experience in the rehabilitation of its own physically handicapped. This, plus a shortage of manpower, presented the possibility of unifying the programs for the civilian and military handicapped people. Steps were taken for the formation of a plan with close cooperation among Medical, Personnel, Training and Safety Divisions.

Since it was first necessary to determine the jobs available for these individuals, a survey was made in which each supervisor listed the jobs in his department

which could be performed by employees with the handicaps listed on the survey cards. With this information, the Personnel Division with its knowledge of "job analysis" interviewed the individuals, and presented the applicant to the Medical Division for approval of the specific job chosen. A personal interview followed, impressing upon the employee the necessity for care and safety in his work, and a note was placed upon his record card that no transfer could be made without the consent of the Medical Division.

Supervision and training now appeared in the picture. Supervision was instructed in the proper handling of these people, and then the "Job Instructor Training" given job trainers. That supervision has given its complete approval, there can be no doubt, for almost daily more handicapped employees are requested. They are continually finding new jobs that handicapped people can do. Many of the employees with physical handicaps are attending special classes given by the Training Department in order that they may advance in the quest of independence.

"Caterpillar" has approximately 800 handicapped persons in gainful and most useful work. This number is remarkable when one considers that this company builds heavy machinery, calling for heavy and light machine work, similar types of assembling, and grey iron and aluminum foundry work. Those called "handicapped" by "Caterpillar" are only those with major defects: loss of one or both extremities; marked deformities, congenital or otherwise; loss of one or both eyes; loss of hearing or speech; and those recovered from Tuberculosis, heart disease, etc.

Yes, the program works in the hardest, most callous test tube of them all, — actual experience. The vast majority of these people have a production, safety and absentee record far above normal. They are paid at the same rate as normal individuals, are shown no special favors, and are in no way considered as accepting charity. They will be given the same consideration as any other employee in being retained on the job in the days following the war.

The best answer to "Will It Work?" is from the lips of "Caterpillar" supervision reflecting positive company policy:

"Give us as many of this type of workman as you can get!"

Small industrial and commercial establishments are able to do excellent work in the placement of handicapped people because of first-hand knowledge of the requirements of their jobs and a direct contact with their employees.

## THE PEORIA PLAN AND WHAT IT MEANS

This is "The Peoria Plan" in action. It is the framework of the community structure on which the burden of human rehabilitation rests. You may want to observe it closely, perhaps not to copy it in total, but to apply the broad general principles to your own civic problem. These general principles are time-tested and work-proven. We believe that in them lie the essentials of a comprehensive, efficient and workable program which, multiplied many times by the number of cities, towns, and villages over the nation, will conserve the greatest of all American assets — useful and self-respecting human beings.

At the head of the organization plan is, of course, the executive branch, which is directed in this case by an industrial medical director and a business executive. The committee consists of a cohesive smaller group empowered to pass on policy. Branching to the right from this are the major committees, which are considered individually in this explanation.

The purpose of the organization committee is to enlist all phases of community activity — business, labor, church, school, veterans' groups, etc. — that are interested in the human rehabilitation problem. This group is mainly consultive for the purpose of promoting civic enthusiasm and dispatch. The publicity activities include winning public support through the means of the radio, movies, newspapers, plant publications, labor magazines, and speakers. Such publicity is also of value in aiding to underwrite the program and to enlist State or Federal aid for office space, stenographic assistance, and the services of an all-important counselor.

"The Peoria Plan" has been financed by public-spirited citizens and many different organizations.

The employer survey committee undertakes by means of a survey card to canvass all job possibilities in the community that handicapped men and women could do.

The intake sources include the Federal, State, and Local agencies listed at the end of this article.

Vocational training aids come next. In Peoria, Bradley Polytechnic Institute, Brown's School of Business, and others contracted by the government, are already doing rehabilitation work with some ex-service men. They offer both facilities and counsel. If similar facilities do not exist in your community, Federal, State, or other aid can be enlisted.

A complete case analysis is effected, of course, by the counselor before any placement is attempted. Case action is the working out of the disposition, with complete records being kept for follow-up. This is a PERMANENT program; fully employables will find the transition relatively easy. Medical restoration is effected through existing agencies for those needing it, as is vocational training in the manner mentioned.

The guidance committee is a small group that acts as a clearing house for the final disposition of the case. It is important to have actual men and women of business represented on this committee.

## "THE PEORIA PLAN" SUMMARIZED

In conclusion let us briefly summarize the outstanding points of this program.

1. Now is the time to organize — do not wait until the disabled veterans return from the war.

## FINDING THE JOB

It is exceedingly important that a community plan have in advance a knowledge of the jobs available in their area for the employment of people with different handicaps. The problems of each community will vary because of the difference in the type of businesses.

The first step is to find the JOB the MAN can DO. This can be done by the use of the survey card. The sample card printed below presents a general outline of a form which may be followed in a community survey.

| COMPANY | | DEPARTMENT | | | | | | | | | DATE | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CLERICAL | | | TRADE | | | MANUFTG. | | | SERVICE | | | OTHER | | |
| MEMBER | LOSS | *S. | S-S. | U-S. | S. | S-S. | U-S. | S. | S-S. | U-S. | S. | S-S. | U-S. | S. | S-S. | U-S. |
| SIGHT | PARTIAL | | | | | | | | | | | | | | | |
| | TOTAL | | | | | | | | | | | | | | | |
| HEARING | PARTIAL | | | | | | | | | | | | | | | |
| | TOTAL | | | | | | | | | | | | | | | |
| LEGS | PARTIAL | | | | | | | | | | | | | | | |
| | TOTAL | | | | | | | | | | | | | | | |
| FEET | PARTIAL | | | | | | | | | | | | | | | |
| | TOTAL | | | | | | | | | | | | | | | |
| HANDS | PARTIAL | | | | | | | | | | | | | | | |
| | TOTAL | | | | | | | | | | | | | | | |
| ARMS | PARTIAL | | | | | | | | | | | | | | | |
| | TOTAL | | | | | | | | | | | | | | | |
| HEART DISEASE | | | | | | | | | | | | | | | | |
| BACK CONDITION | | | | | | | | | | | | | | | | |
| OTHER ORGANIC DISABILITIES | | | | | | | | | | | | | | | | |
| TOTAL NO. OF JOBS THAT ABOVE PEOPLE COULD DO | | | | | | | | | | | | | | | | |

* S. — Skilled S-S. — Semi-skilled U-S. — Unskilled

In addition to its use as a placement and utilization tool, it may be used to furnish data on the number of jobs available in any business enterprise large or small.

2. A well organized program in each company is necessary for success. In some organizations, this consists of close cooperation between Medical, Personnel, Training and Safety Divisions, and Supervisors.
3. A survey of jobs is essential.
4. Employers of small groups can participate because of first hand knowledge of their jobs.
5. The production, safety, and absentee record of the physically handicapped is above average.
6. Classification of handicapped individuals should be clarified.
7. "War neurosis" cases will benefit from quick employment with special attention given to individual cases.
8. Time is valuable. Soon after the handicapped returning veteran begins to look for a job, he should be properly placed. Delay is discouraging and demoralizing.
9. We recommend to other communities their sincere consideration of "The Peoria Plan"

"The Peoria Plan" for human rehabilitation is a fine humanitarian program which is applicable to all post-war employment problems. It gives to every individual the opportunity to receive his "God Given Rights" to care for himself and his dependents. Above all ,it demonstrates the willingness of all concerned to contribute their share in making the United States of America the outstanding example of true democracy.

### GROUPS INCLUDED IN "THE PEORIA PLAN"

Altrusa Club
American Federation of Labor
American Legion
American Legion Auxiliary
American Red Cross
American War Dads
Army Mothers of America
Board of Health
Bradley Polytechnic Institute

Catholic Diocesan Chancery Office
Congress of Industrial Organization
County Supervisors
Council of School Clubs
Disabled American Veterans
Gold Star Mothers
Good Will Industries
Illinois State Rehabilitation Office
Kiwanis Club
Lions Club
Marine Corps League
Mayor and City Council Members
Mothers of Silver & Gold Wings Fliers of America
Navy Mother's Club
Optimist Club
Order of Purple Heart
Peoria Advertising & Selling Club
Peoria Association of Commerce
Peoria Community Fund
Peoria County Farm Bureau
Peoria County Tuberculosis Association
Peoria Journal-Transcript
Peoria Junior Chamber of Commerce
Peoria Manufacturers' Assn.
Peoria Medical Society
Peoria Merchants Association
Peoria Ministerial Association
Peoria Municipal Tuberculosis Sanitarium
Peoria Navy Club
Peoria Star
Publix Great States Theatres, Inc.
Rotary Club
School Board
Selective Service Boards
United Spanish American War Veterans
United States Employment Service
Visiting Nurses' Association
WMBD Radio Station
War Manpower Commission (District)
Women's Civic Federation

## CERTIFICATION OF WORKERS' ILLNESS*

Certification by physicians of spurious worker illness or for unessential change of occupation is coming under close scrutiny by industry and War Manpower personnel. The abuse has been carried so far in some areas that physicians' statements are discounted and the workers are no longer being given releases for transfer. Frequently the physician accepts the worker's word that his job is harmful without examination of the patient or knowledge of the working environment.

Sufficient complaints were received for the Board of Trustees of the Richmond (Va.) Academy of Medicine to issue the following letter to its membership in September:

"To the Members of the Richmond Academy of Medicine:

"Dear Doctor:

"We are writing to call your attention to a situation that is confronting many of our doctors at the present time. That matter is doubly serious since it is interfering with the production of war materials, and for that reason we are asking that you read this letter carefully.

"Many employees will stay away from their jobs for a day or more for very minor conditions. When they are ready to return to the job, they will go to the family physician, telling him they were sick and asking him to give them a note to that effect which they can present to the employer.

"The Journal of the American Medical Association for July 17, 1943, had a Current Comment discussion of this subject. The same idea has been brought out in other medical journals, especially Industrial Medicine.

"The Committee on Industrial Medicine and Contract Practice of the Academy has petitioned the Trustees that the Academy membership be written regarding this matter. For the good of the government program and for our own professional reputation, we are asking the membership, as a part of the war effort, to be very sure that persons have been ill enough to justify their failure to report to work before giving them a statement that they are away from work because of illness.

"If your J.A.M.A. is convenient we suggest you read under Current Comment, 'The Doctor's Responsibility in Absenteeism', in the July 17th issue.

"Most sincerely yours,
"Beverly R. Tucker,
Chairman, Board of Trustees."

This matter is of sufficient importance for local committees on industrial health to make it an issue with the medical profession in regular meetings and through state and local medical journals.

*Industrial Health Bulletin, Council on Industrial Health, A.M.A., Dec. 23, 1943.

## VOLUME OF INDUSTRIAL ACCIDENTS INCREASES IN 1943*

### Nearly Nine Percent More Injuries Reported in First Nine Months of 1943 Compared with Same Period of 1942; "Machinery" Injuries Show 15 Percent Increase

A study of the Illinois accident experience in each of the past few years, when production was so greatly intensified, first for defense and later for our war effort, the tendency has been clearly noted toward a rise in accident levels which would probably continue so long as the labor-turnover situation remained unsettled and while man-hour ex-

*The Illinois Labor Bulletin, Dec. 31, 1943.

posure was approaching its peak. It is apparent from the record that this upward tendency has not yet reached the leveling off point, when we would naturally expect the trend of accident frequency to be definitely downward.

*Accidents Increase with Increased Employment*

During the first nine months of 1943, without taking into account increased man-hour exposure, the volume of accidental and occupational disease injuries to workers in the course of their employment in Illinois industry, compared with the same period of 1942, has shown an increase of 8.6 percent, presaging a new high for yearly total injuries reported, or at least an approach to the 1929 levels. This relative increase in the number of injuries occurred mainly in the manufacturing industries where the employment gains have been greatest.

Under ordinary conditions an increase in the volume of industrial injuries would be expected to follow an increase in man-hours exposure to accident hazards. Under present conditions, other factors contributing to an increase in the volume of injuries include: employment of large numbers of new workers — many very young and many very old, and most of them equally lacking in skill and the cautious habits of the experienced, safety-conscious worker; transfer of many workers from one type of manufacturing work to other types in many plants, the use of reconditioned and formerly idle machines and production facilities; the employment of new types of machinery, processes, and production methods; the effort to speed up production leading to overtime employment; and, perhaps most important of all, inadequate supervisory personnel.

*More Favorable Accident Experience Indicated*

How badly the State fared this year from a safety viewpoint will not be seen until more is known of man-hours exposure for the year 1943. Without attempting to minimize the record for the current year, it is probable that accident frequency based on man-hours exposure has not risen during the year. A study of the accident records for the first nine months of 1943 in relation to employment figures reflected in the manufacturing employment indexes (compiled monthly by the Division of Statistics and Research) indicates that the increase in man-hours exposure has been substantially greater than the increase in the number of reported injuries.

Information concerning industrial injuries is available only from records of the Industrial Commission. These records cover only injuries reported as compensable under the Workmen's Compensation and Occupational Diseases Acts, and provide no information as to injuries resulting in temporary disability of one week or less.

A major limitation of the injury reports from an accident frequency analysis point of view is that the reporting is not current. There is an average reporting lag of over seven weeks (median lag for 1942 was 7.3 weeks) i.e., the average period between the date of injury and the date on which the report was received by the Industrial Commission was 7.3 weeks.

While available information is too inadequate to permit the computation of reasonably reliable accident frequency rates, the following tabulations will provide a good indication of the increase in the volume of injuries in Illinois during the year 1943.

41,617 *Industrial Injuries Reported as Compensable during First Nine Months of* 1943

A total of 41,617 industrial injuries was reported as compensable during the first three quarters of 1943. This total is 8.6 percent greater than the 38,307 injuries reported during the same period of 1942.

*Injuries in Manufacturing Increase over 20 Percent*

Table 1 provides a summary of injuries reported in the nine months (January through September) of 1942 and 1943, by major industry classifications.

Table 1 — Comparison of Number of Injuries Reported in Nine Months, January through September 1942 and 1943, by Major Industry Classifications

| Industry classification | Injuries reported in 9 months 1943 | 1942 | % change 1942 to 1943 |
|---|---|---|---|
| Total — All Industries | 41,617 | 38,307 | + 8.6 |
| Agriculture, forestry, fishing | 244 | 256 | — 4.7 |
| Mining and quarrying | 3,783 | 3,548 | + 6.6 |
| Construction | 4,121 | 4,138 | — 0.4 |
| Manufacturing | 23,030 | 19,119 | +20.5 |
| Wholesale and retail trade | 4,442 | 5,143 | —13.6 |
| Finance, insurance, real estate | 410 | 494 | —17.0 |
| Transportation, public utilities | 2,953 | 2,555 | +15.6 |
| Service industries | 2,634 | 3,054 | —13.8 |

It will be noted that while the number of injuries reported increased in manufacturing, transportation and other public utilities, and mining groups, the other industrial classifications showed reductions in reported injuries. This in a measure probably reflects the shift of man-power from non-essential, non-deferrable industries.

Manufacturing industries as a whole showed an increase of 20.5 percent in injuries reported from January through September for the years 1942 and 1943. While tobacco products, textile-mill products, and chemical industries reported fewer injuries for the 1943 period, an increase in the volume of injuries was noted for all other groups, ranging from 2.6 percent for the petroleum industry to 61.9 percent for electrical machinery. Large relative increases were also noted for the various other metal-working groups, for apparel, lumber, and rubber products.

*Injuries Due to Handling Objects Exceed 25 Percent of Total Reported*

In the nine months' period — January through September — of each of the years 1941 through 1943, over 26 percent of total injuries reported were due to the handling of objects, while machinery ranked second, and falls of persons, third, as a source of reported injuries.

Occupational disease causes accounted for 34 percent more injuries in the 1943 period than in 1942 and for 46 percent more than in 1941. Poisonous and corrosive substances caused 17 percent more injuries in 1943 than 1942 and 24 percent more than in 1941. Machinery accidents caused nearly 15 percent more injuries in 1943 than in 1942 and 27 percent more than in 1941. Handling objects resulted in 8 percent more injuries in 1943 than in 1942 and 19 percent more than in 1941. It will be noted that the rank of the various types of injury causes is much the same from year to year.

*More Injuries Caused by "Machinery" Accidents in 1943 than in 1942*

Injuries incurred in connection with machinery, reported for the first nine months of 1943, show a 14.8 percent increase over the same period of 1942. A study of reported injuries by industry classifications indicates sharp increases in "machinery" injuries during the 1943 period over those in 1942 for all main industry classifications except trade and the finance, insurance and real estate groups. While total injuries reported for agriculture, construction, and the service industries were fewer in 1943 than in 1942 for the nine-month periods, injuries caused by machinery accidents increased in 1943 in these industries by 83 percent, 12 percent, and 3 percent respectively.

Manufacturing industries reported 20.5 percent more injuries in the first nine months of 1943 than in the corresponding period of 1942. Injuries due to machinery accidents rose in the same proportion, accounting for 20.5 percent more than in 1942. In the 1943 period, increases in "machinery" injuries were as follows: electrical machinery 72.9 percent, apparel 40.3 percent, iron and steel 34.5 percent, transportation equipment 31.6 percent, foods 22.7 percent, automobiles 19 percent, furniture 16.5 percent, non-electrical machinery 14 percent, etc.

## HOW TO GET INTO TROUBLE WITH FRACTURES

A doctor can get into more trouble in less time with fractures than with any other type of work. There are at least five pitfalls that the family physician or surgical specialist can get into with equal celerity.

The doctor may proceed to treat a fractured pelvis efficiently, only to discover later that the patient has also a ruptured bladder. An eminent specialist treated a fractured ulna for months before he learned that the patient had a dislocated head of the radius, on the same side.

An unconscious child was found to have a fractured skull following a motor accident. Days later the child regained consciousness, but complained of pain in the chest, where fractured ribs had been missed. One must remember always that he is treating a whole person, not merely a fracture.

Valuable as x-rays are in diagnosis, they are even more important for position and union. Neglect to have a fracture x-rayed is in itself almost ground for a malpractice suit.

One may feel that his prestige suffers when he asks for help. When a consultant is called patients are pleased and proud that their own doctor thus shows his interest in their welfare.

The American College of Surgeons published recently a small booklet on fractures for the guidance of general practitioners and surgeons. The treatment of some types of fractures is so difficult that it is only fair to the patient that he be treated by those equipped with the necessary mechanical devices and experience. Further the final results are in some cases so disappointing that the average doctor would be well advised, from a purely selfish view, to pass them on.

The doctor who keeps no record of his findings at the time of fracture, no progress notes, no record of complications, can be sure of getting into trouble sooner or later. In a case of supracondylar fracture of the humerus, the doctor who actually writes down whether a radial pulse can be felt is likely to recognize its absence and do something about it. It is obviously desirable to have a record in writing before an anesthetic is administered or any manipulation carried out, in cases where pulse or sensation is impaired.—*Southern Medicine and Surgery.*

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Every violation of truth is not only a sort of suicide in the liar, but is a stab at the health of human society.—*Ralph Waldo Emerson in Essays, First Series: Prudence.*

# News of the State

## PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

### FURTHER OPPORTUNITIES FOR POST-GRADUATE STUDY IN CHICAGO

Physicians of Illinois are cordially invited to attend these clinics held at St. Luke's Hospital in Chicago:

(1) The Clinical Pathological Conferences, held every Friday from 9:00 to 10:00 A.M., on the 10th floor of the Main Building of St. Luke's Hospital. These Conferences are divided into two parts, one of which is devoted to clinico-pathological conference, and the other to clinical presentation.

(2) The Tumor Clinics, held by Dr. Harry E. Mock every Wednesday at 9:00 A.M., in the Out-Patient Department of St. Luke's Hospital.

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### POST GRADUATE CONFERENCE

The Post-Graduate Committee of the Illinois State Medical Society announces a Post-Graduate Conference to be held at Centralia, March 22nd for all doctors of Southern Illinois. The following program has been arranged in conjunction with the Marion County Medical Society:

Dr. C. O. Lane, Presiding — Member Post-Graduate Committee.

Afternoon Session at St. Mary's Hospital — Centralia.

2:00-2:40 P.M.—"Practical Points in the Recognition and Management of Coronary Disease", O. P. J. Falk, M.D., St. Louis

2:40-3:20 P.M.—"The Discriminate Use of the Sulfonamides", R. O. Muether, M.D., St. Louis

3:30-4:00 P.M.—"Navy Men of Medicine" and "Full Speed Ahead" — taking movies from the Navy Public Relations of Chicago

4:00-4:40 P.M.—"Diagnosis of Blood Dyscrasias", Howard Alt, M.D., Chicago

4:45-5:30 P.M.—Round Tables on the above subjects:

*Evening Meeting — Langenfeld Hotel*

6:30 P.M.—Dinner — Compliments of Marion County Medical Society Langenfeld Hotel

7:30 P.M.—"Surgery of the Biliary Tract" — Warren Cole, M.D., Chicago

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Captain Frank D. Jacobs has sent a V Mail message to the Journal as follows: "Received December issue Journal today and it looked very good coming from Illinois. Hadn't changed my address when in camp in States for my family always sent Journal to me but now I hope to get it direct." He will.

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The Chicago Daily News of February 19th carried the following story of thirteen Chicagoans on staff of a hospital in Italy:

Three officers and 10 nurses from Chicago, and vicinity are on the staff of an evacuation hospital in Italy, which was commended recently for its efficiency and skill in treating 5th Army battle casualties at the front.

The officers are Lt. Col. Hugh Macdonald, executive officer, of Glenview, formerly practicing physician at 636 Church St., Evanston; Maj. Samuel Perlman, 5122 N. Avers Ave., and Lt. Michael English of Chicago. Nurses serving with the unit include Lts. Anita Woithe, 3644 E. 105th St.; Elaine Wedemeyer, 730 S. Washington St., Park Ridge; Viola Van Clay, Dolton; Margaret Troy, 720 W. Sheridan Rd.; Norma

Pollo, 410 E. 113th St.; Ramona Music, 622 S. Mozart St.; Anna Lance, 303 S. Elm St., Clinton; Bertha Kreiling, Forest City; Sylvia Hamper, 812 Parkview Ave., Joliet, and Marcella Edgren, 1685 Henry Ave., Des Plaines.

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1st Lieut. Silvio Del Chicca, formerly of Chicago, recently was transferred from the station hospital at Fort Benjamin Harrison, Indiana, to the Army Service Forces Depot in Columbus, where he will assume his duties as assistant depot surgeon. Dr. Del Chicca graduated from the University of Florence, Italy, in 1927 and entered the service Oct. 7, 1943.

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Irving S. Cutter has presented to THE TRIBUNE his library of 3,000 volumes pertaining to the history of the American western states. It is one of the finest of its kind in private hands in America and includes priceless material on the development of the states west of the Mississippi. All the books are historical and biographical, and many of them are documented source books for historians. Dr. Cutter's extensive medical library is not included in the gift.

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The Illinois Society for Mental Hygiene held its Annual Meeting on March thirteenth with Dr. Luther E. Woodward, Field Agent, Rehabilitation Division of the National Committee for Mental Hygiene speaking on "Rehabilitation of Veterans with Neuropsychiatric Disorders".

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## COMING MEETINGS

March 21 — Lake County Medical Society, Lake County Tuberculosis Sanitarium, Waukegan, Illinois, 8:00 P.M. Forum discussion of "Medical Service and the Wagner Bill."

March 22 — Post-Graduate Conference — Centralia, 2:00 P. M., St. Mary's Hospital, 6:30 Langenfeld Hotel.

March 23 — The regular meeting of the Chicago Urological Society will be a joint meeting with the Chicago Society of Industrial Medicine and Surgery, and will be held on Thursday, March 23, 1944, at 8 P. M. in Room 17, Club Floor, Palmer House.

Preceding the meeting at 6:00 P. M. there will be cocktails in Room 17, Club Floor, Palmer House, followed by dinner at 6:30 P. M. Reservations ($3.00 per plate) should be made in advance.

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*Program*

1. Traumatic Injuries of the Urethra and Bladder as Complications of Fractures of the Bony Pelvis, M.D., Edward J. McCague, Pittsburgh, Pa. (by invitation)
2. Problems Concerned in Postoperative Management of Injuries of the Lower Urinary Tract. Vincent J. O'Conor, M.D.

*General Discussion*

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*Clinical Meeting*

The Clinical Meeting will be held at the Research and Educational Hospitals, University of Illinois, 808 S. Wood Street, Thursday morning, March 23, at 9 o'clock.

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March 24 — Will-Grundy County Medical Society, Louis Joliet Hotel, Joliet 12:00 noon — Wayne W. Flora — "Proctologic Diseases"

March 31 — Will-Grundy County — C. C. Maher — "Hypertension"

April 11 — Kankakee County Medical Society — Kankakee

April 11 — Bureau County Medical Society — St. Margaret's Hospital, Spring Valley — 6:30 P. M. — Willard VanHazel — "Chest Surgery"

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## DEATHS

Jasper M. Adams, Canton; National University of Arts and Sciences Medical Department, St. Louis, 1889. In 1940 was awarded a "Fifty Year Pin" by the Illinois State Medical Society. Died January 24, 1944 at the age of 86.

Milton R. Barker, Wilmette; Northwestern University Medical School, 1901. Had practiced in Chicago and Wilmette over 50 years. Died February 3, 1944 at the age of 92.

Max Biesenthal, Chicago; University of Illinois College of Physicians and Surgeons, 1904. Medical Director of the Chicago-Winfield Tuberculosis Sanitarium; attending staff of Michael Reese Hospital. Died January 20, 1944 at the age of 61 years.

Sam Brock, Chicago; Johns Hopkins University, 1916. Associate in Surgery at Northwestern University Medical School. Received medical discharge in 1942 after service in New Guinea. Died February 11, 1944 at the age of 55.

Cono Ciufia, Chicago; Northwestern University Medical School, 1927. For several years he was a resi-

dent surgeon in the Buffalo, New York City Hospital; was on surgical staff of Northwestern University Medical School from 1930 to 1938; member of the staff of Grant and Walther Memorial Hospitals. Was stricken with cerebral hemorrhage while shoveling snow on February 11, 1944. He was 47 years of age.

Sanford R. Gifford, Chicago; University of Nebraska Medical School, 1918. Professor of Ophthalmology at Northwestern University Medical School, head of ophthalmology department at Passavent Hospital, on attending staff of County Hospital. Internationally known as author of many medical books. He served as a First Lieutenant in World War 1. Died of pneumonia February 24, 1944 at the age of 52 years.

R. F. Goolsby, Chicago; Meharry Medical College, Nashville, 1913. Had practiced medicine in Chicago for 35 years. Died February 3, 1944 at the age of 59.

Lydia Heckman Holmes, retired, Pekin; Loyola University School of Medicine, 1917. Life member and past president of Tazewell County Medical Society. Had been in failing health for some time. Died January 22, 1944 at the age of 72.

Edward W. Jackson, Chicago; University of Illinois College of Medicine, 1903. Served in Spanish-American War. Was honorary staff member of the Norwegian-American Hospital. Died January 30, 1944, aged 67.

James J. Moran, Spring Valley; Northwestern University Medical School, 1905. Was senior of the staff of St. Margaret's Hospital. Member of the Hall Township High School Board of Education from 1926 to 1935. Had practiced medicine in Spring Valley 39 years. Died following an illness of three months on January 20, 1944 at the age of 67 years.

Redone Edgar Wasson, Fairview; Keokuk Medical College, College of Physicians and Surgeons, 1906. Practiced in Fairview since his graduation from medical college. Died following a stroke January 22, 1944 at the age of 79.

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The remarkable decrease in tuberculosis mortality, which resulted in lowering tuberculosis from one of first rank in numerical importance to seventh, conceals the fact that this unfavorable situation does not hold for all age groups; from early adulthood to age 35 it is still the first killer among diseases. Mortality from tuberculosis is highest in large cities, lowest in rural areas. The rate for males is considerably higher than for females and the disease is still much more fatal among the non-white races. J. Yerushalmy, H. E. Hilleboe, M.D., C. E. Palmer, M.D. Pub. Health Rep., Oct. 1, 1943.

## THE FIFTH FREEDOM

Add to the now famous four freedoms, freedom from pain. Nor is this an attempt to take our attention from the emotional elements of the war. We sincerely believe that this fifth freedom is a desire as basic as the others.

To test its power, throw the golden apple among mortals with the promise that one freedom shall be theirs. In the face of pain, is there one of us who would ask for freedom of speech?

But the public has not learned of the intricate balances of the body. People do not sense the complex problems involved in the field of medicine. They are willing to purchase freedom from pain at any price, but they will buy, as they do an automobile or a hat, from the salesman who is able to gain their confidence.

So we find an admittedly ignorant public but a public that is highly sincere in the selection of its medical care. Sincere because they want freedom from pain. Ignorant because they profess no knowledge of how this may be accomplished.

It does provide a fertile market for the unscrupulous cultist, who, without training, uses his powers of influencing others to the point that his patients believe his treatment to be adequate. He glosses his limitations with a veneer of optimism which the patient interprets to be confidence. He is in contrast with the doctor of medicine, in that he requests a governing body, instead of a school, to make a doctor of him.

The quarrel does not concern the layman, because he fails to understand the principles involved. He goes on a personal errand. He has interest neither in cults nor in diplomas. He has no thought but for the cure of his ailment. There is no desire but for freedom from pain.

From our point of view there are two solutions.

One is to force the layman to do what is best for him, in spite of his misguided beliefs. The other is to teach him the truth, to talk to him in words he knows the meaning of, to show him how he may select his medical care safely. Either of those methods would provide the layman much freedom from pain, but certainly the latter plan cannot be altogether ignored.—*Wichita (Kan.) Med. Bull.*

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Tuberculosis is one of the enemies that our forces for health have to overcome, an enemy just as ruthless, as sneaking, as stubborn and as deadly as any now confronting us abroad or at home. But if we face this fight with the same determination, the same "will to win" and the same "all-out" effort that we are putting into the great world fight, we will win two major wars at once, and the world will be a safer and healthier, as well as happier, place in which to live, and, on the average, we will sojourn here longer. Matthew Woll. Pennsylvania's Health, Feb. 1942.

The true worth of an experimenter consists in his pursuing not only what he seeks in his experiment, but also what he did not seek.—*Claude Bernard,* 1865.

# P. R. N.

The Jocular Jingles of C. G. F.

*by*

*Charles G. Farnum M. D.*

*Peoria, Ill.*

To the Council of the Illinois State Medical Society
c/o Dr. Harold M. Camp, Editor
Illinois Medical Journal
Monmouth, Illinois.
Gentlemen:

Pursuant to your recent editorial statement that the Council "will gladly welcome suggestions for improvement of the Journal and likewise constructive criticisms of its policies" the following is submitted in all humbleness.

The format of the Journal is the best we have ever seen. However [redacted].

The editorial policy and the editorials themselves may be classed together as [redacted]. Much more might be said but [redacted].

At times the scientific articles seem to [redacted]. At other times they are [redacted]. If the discussions could be lengthened ever so little the articles themselves could be omitted. This might prove to be [redacted].

The department trend is [redacted]. If this is to be carried further we suggest the following additional departments: (1) [redacted], (2) [redacted], (3) [redacted], (4) [redacted], (5) [redacted], (6) [redacted] However, the Clinicopatholigical Dept. is [redacted]. It should be in every issue.

P. R. N. is [redacted].

I have no doubt but that you will "gladly welcome" this frank, kindly and highly constructive criticism; at any rate, you asked for it.

Yours truly,

Professor Paresis

P.S. In keeping with good military practice and in the customary attempt to avoid controversial issues, I have taken it upon myself to censor my own letter.

P. P.

**TERROR!**

**Appendicitis and encephalitis**
**Afford no terrors for me**
**Endocarditis and peri-arthritis**
**Provide me a chuckle of glee.**

**Anctinomycosis and tuberculosis —**
**I merrily laugh them off.**
**Senile psychosis and enteroptosis**
**Only cause me to scoff.**

**Carcinoma, benign teratoma**
**I look upon with disdain.**
**Malignant sarcoma, acute trachoma**
**Cause me no fear of pain.**

**I smile with ease at all kinds of disease**
**For I'm brave as every one knows.**
**But Oh! how I quiver and shudder and shiver**
**When nursie comes in with the hose.**

A Sonnet To a Scrub-Lady.

To Thee who cometh when the day is young
And musseth up my greatly needed sleep,
For fear thy qualities have gone unsung,
I pen this hymn of protest while I weep.
With stolid mien and iron first you rub
My half denuded form neath scanty towel,
With wiry cloth and icy water scrub,
And cease not though I faintly curse and growl.
If cleanliness is next to godliness
I am a godly creature I opine;
I'd rather be less godly, I confess,
Than suffer from these vicious scrubs of thine.
I would suggest that all these scrubs galore
Be utilized upon the kitchen floor.

**The Clinical Experiences of Professor Paresis.**

**I have just been through a clinic,**
**And it left a taste fellinic,**
**My angelic disposition is satanic;**
**Alopecia to bunions,**
**All these docs may know their onions,**
**But of me they made a wild-eyed raving maniac.**

**Neurologists, psychologists,**
**Gastro-enterologists,**
**Bronchoscopists and allergists so busy,**
**Urologists, proctologists,**
**Oto-laryngologists,**
**Psychiatrists who left me dazed and dizzy;**
**Rhinologists, pathologists,**
**All-seeing roentgenologists,**
**And orthopedists, also dietitians;**
**Surgeons, hematologists,**
**Aurists, dermatologists,**
**The only ones I dodged were obstetricians.**

*Professor Paresis desires to remind us that no man is perfect. Each has his faults and his virtues and his claim to respectability is the balance that remains when the one has been subtracted from the other.*



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†WOLDMAN, E. E. and POLAN, C. G. The Value of Colloidal Aluminum Hydroxide in the Treatment of Peptic Ulcer; A review of 407 Consecutive Cases, Am. J. M. Sc. *198:* 155-164 (Aug.) 1939.

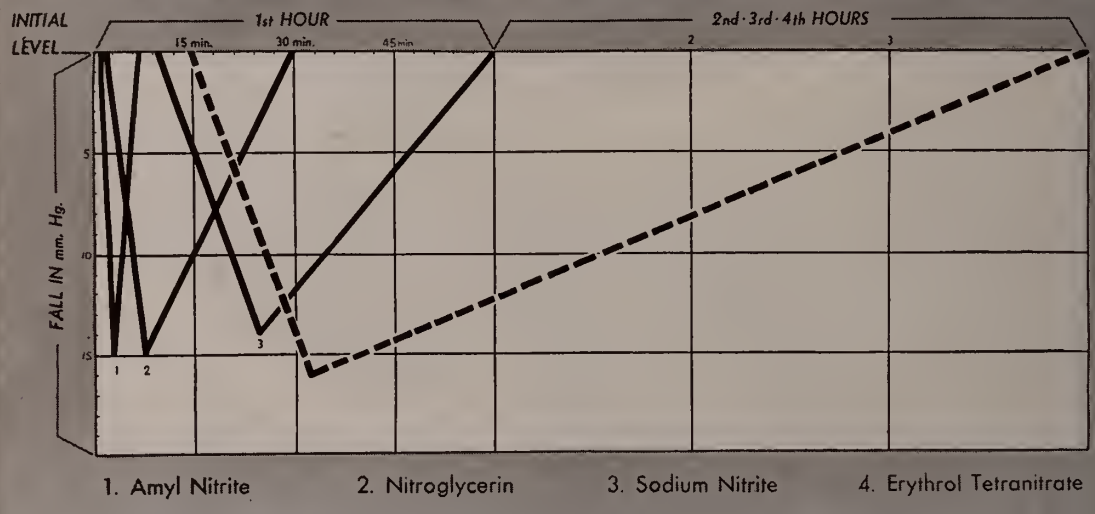
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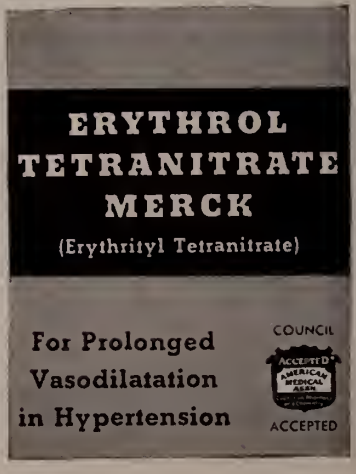
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Treatment of arterial hypertension today is necessarily directed toward relief and not cure. When such measures as rest and dietary control have been unsuccessful, the employment of medical treatment is suggested. Among the various preparations available, Erythrol Tetranitrate offers the advantage of producing a reduction in blood pressure sufficiently prolonged so that administration three times daily may maintain the reduction. Erythrol Tetranitrate Merck may be prescribed over a protracted period with sustained effect. By dilating the peripheral arterioles, it tends to decrease not only the stress of excessive pressure on the arterial walls, but also to relieve the burden of the heart.




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# Book Reviews

Backache and Sciatic Neuritis. Back Injuries — Deformities — Diseases — Disabilities — with notes on The Pelvis, Neck, and Brachial Neuritis. By Philip Lewin, M.D., F.A.C.S., Associate Professor of Bone and Joint Surgery, Northwestern University Medical School; Attending Orthopaedic Surgeon, Cook County Hospital; Attending Orthopaedic Surgeon, Michael Reese Hospital; Professor of Orthopaedic Surgery, Cook County Graduate School of Medicine, Chicago; Lieutenant Colonel, Medical Corps, U. S. Army. Illustrated with 235 Figures. Line Drawings by Harold Laufman, M.D., Instructor in Surgery, Northwestern University Medical School, Chicago; Captain, Medical Corps, U. S. Army. Lea and Febiger, Philadelphia, 1943. Price $10.00.

The diagnosis and treatment of backache, sciatic neuritis and allied conditions has long been difficult for the average practitioner of medicine to handle satisfactorily. These disturbances have been one of the bug-bears for not only the orthopaedic surgeon, but also for the gynecologist, urologist, obstetrician, neurologist and roentgenologist alike. With the ever increasing number of men and women in industrial positions, these disturbances have been quite prominent in the considerations of the industrial surgeon.

The problems have been increased materially through recent knowledge concerning disturbances of intervertebral discs and the herniations more commonly diagnosed today than ever before. Knowledge concerning the anatomical and pathological considerations are highly essential in making the proper evaluation. The author in this book has spent a great amount of time to properly place before the general practitioner the facts needed to make the proper diagnosis and institute proper treatment in these conditions, and has endeavored to drive home the now well known fact that backache is a symptom and not a diagnosis.

Great emphasis is placed on the taking of the history to bring out in the patient's own language, the pertinent facts which will be of value in arriving at the proper diagnosis. There are many pitfalls in interpretation of roentgenograms, for as the author states, "the spine is probably the seat of more abnormalities than any other part of the bony structure, producing symptoms, modifying the normal mechanics and predisposing to stress, strain, weakness and disease". Roentgenograms, although highly essential in most back disturbances, must be interpreted properly and accurately.

Dr. Lewin utilizes a considerable amount of space in this book to considerations of the growth and development of the vertebrae, anatomical, physiological and etiological factors in back disturbances, symptoms, physical, laboratory and roentgenological findings, and the ultimate diagnoses. He outlines in much detail, the proper treatment of the various disturbances, physical therapy and operative treatment, their indications and limitations. In excellent chronological form, he discusses internal derangements of the back, traumatic and industrial causes of backache, back disturbances as seen in military service, infectious disturbances, then the intervertebral disc syndrome, and infantile paralysis and its involvements of the back.

(*Continued on page 38*)



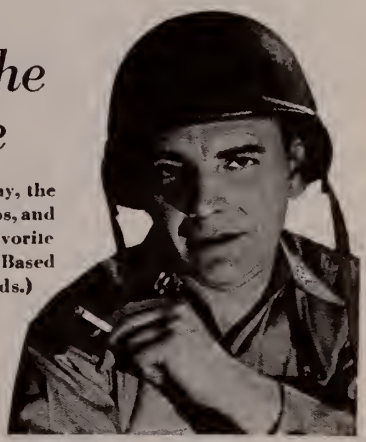

# *Healers on the heights*

*Crawling the crags at dawn . . . Exposed on rocky ledges in the blistering noonday sun . . . Fighting pain and death through the freezing night . . .*

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# Camel

COSTLIER TOBACCOS

New reprint available on cigarette research — Archives of Otolaryngology, March, 1943, pp. 404-410. Camel Cigarettes, Medical Relations Division, One Pershing Square, New York 17, N. Y.

BOOK REVIEWS (Continued)

Spinal injuries, including fracture, are likewise discussed, and the sciatic syndrome is also taken up in much detail. The book would not be complete without careful consideration of low back lesions and of course they are there, as well as the sacro-iliac and lumbo-sacral joint disorders.

The last chapter in the book deals with equalization of length of lower extremities with the bone lengthening and bone shortening operations. Then the appendix deals with a discussion of such subjects as low back pain from the orthopaedic standpoint; postataxial referred pain producing backache and sciatica, neurological diagnostic points of especial value to the orthopaedic surgeon; the medico-legal and compensation problems, as well as a number of other closely allied subjects all of much interest to the practitioner.

The book was intended to be of value especially to the general practitioner, but it should be a most welcome addition to any modern medical library, and the reviewer predicts that it will be received very well indeed.

---

The Modern Management of Colitis: By J. Arnold Bargen, M.D., M.S., F.A.C.P., Chief of the Section on Intestinal Diseases, Division of Medicine, Mayo Clinic; Associate Professor of Medicine, Mayo Foundation, Rochester, Minnesota; Secretary, American Gastroenterological Association; Vice-Chairman, Section on Gastroenterology and Proctology, American Medical Association. Charles C. Thomas, Publisher, Springfield, Illinois and Baltimore, Maryland; 1943. Price $7.00.

The author has endeavored to get into one compact volume the essential data to permit the diagnosis, treatment and complications of the many infective disturbances found in the intestinal tract. He shows the methods by which inflammatory conditions found in the intestinal tract may be differentiated from the functional disorders so frequently seen. The book was started before the war and although the author was inclined to postpone the publication of the book until after the conflict was ended, he was cognizant of the fact that during war time with the stress and strain upon the people, there is invariably an increase in these conditions and he was urged to complete the volume as soon as possible.

In the book the author has drawn largely from his individual observations and experiments while at the Mayo Clinic. Such diagnostic criteria as clinical, laboratory, proctologic and roentgenologic examinations and studies have been used and commented upon throughout the volume.

Beginning with the irritable colon, the many types of colonic disturbances are discussed at great length, including the several types of ulcerative colitis, the relationship to food and vitamin deficiencies, the bacillary types, and those with a definitely related allergy basis are well presented in much detail. The interesting case histories presented throughout the monograph add much to its interest and value.

The last chapter in the book deals with conditions which must be distinguished from colitis, with the presentation of a number of interesting case histories which likewise are of unusual interest. The book, monographic in type, should be of much interest to the average reader, and should be widely read by general practitioners and others desiring authentic information on the important subject of colitis.

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Chemotherapy of Gonococcic Infections; By Russell D. Herrold, Russell D. Herrold, B.S., M.D., Associate Professor of Surgery, (Urology) College of Medicine, University of Illinois, Chicago. The C. V. Mosby Company, St. Louis, 1943. Price $3.00.

The author states that until five years ago but little progress had been made in the management of gonococcic infections in the past quarter century, but with the advent of the sulfonamides the picture has been changed. Clinical experience gained through the management of some 1,800 cases of gonococcic infections on the part of the author, is the basis for his book, these having been treated by modern chemotherapeutic measures. Eight hundred of the cases were treatd with sulfathiozole alone during the past two years, while many cases were treated with eight or more of the sulfa group drugs.

It is not the intention of the author to enter into controversies with many others who have written freely upon this subject, but he gives his own observations developed through an unusual

(*Continued on page* 40)

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BOOK REVIEWS (Continued)

amount of clinical material at the University of Illinois and in private practice. Considerable amount of discussion appears in the book on the diagnosis of gonococcic infections in the male and female, and he gives in much detail, his ideas as to the desirable routine examination.

Each of the commonly used sulfa drugs is described in much detail and the author states that the earlier types used have been replaced by less toxic and more reliable preparations. Toxic reactions which have been encountered are reported, then appears the author's own recommendations as to dosage and methods of administration of these chemotherapeutic agents.

The book should be of interest especially to those physicians in general practice who too frequently encounter gonococcic infections, and who have not had the clinical experience to permit them to evaluate properly the desired dosage and select the type of chemotherapeutic agent which should be of greatest value in handling the cases.

---

MINOR SURGERY: By Frederick Christopher, S.B., M.D., F.A.C.S., Associate Professor of Surgery at Northwestern University Medical School, Chicago; Chief Surgeon at the Evanston (Ill.) Hospital. Fifth Edition, Reset. 1006 pages with 575 illustrations. W. B. Saunders Company, Philadelphia & London, 1944. Price $10.00.

This is the fifth edition of a highly popular and practical book which has been entirely reset and produced in full compliance with the governmental regulations for conservation of paper and other essential materials. Although the author realizes that all minor surgery is potentially major surgery, and that there can never be a sharp line of demarcation between major and minor surgery, he has endeavored in this volume to give the essential data concerning those conditions which comprise the large majority of surgical affections.

The book is written primarily to fill the needs for those men in general practice who must do some surgery and who may not have access to a modern hospital, or have contact with specialists in surgery; it is likewise for the intern and resident who are desirous of keeping abreast with proper diagnosis and treatment of these many conditions requiring "minor surgery". Many changes in keeping with surgical progress have been incorporated in this volume which did not appear in the fourth edition which was published in 1940.

Among these additions are the use of the sulfa and allied drugs in surgery, penicillin therapy in surgical conditions, the more recent developments in the treatment and recognition of shock, treatment of burns, the employment of plaster casts in wound treatment, improvements in pre-operative and post-operative care, use of the Miller-Abbott tube, and many other equally important recent developments which have aided materially in reducing the mortality from surgical procedures as well as minimizing the hospitalization period for the patient.

The book is profusely illustrated, and this adds materially to the interest and value of the book itself. Much space is devoted to considerations of such important subjects as wound healing, management of open wounds, injuries to the various parts of the human body, minor surgical technic, and preoperative and postoperative care.

This is indeed a valuable addition to the library of any general practitioner or those desirous of keeping up with the times. It should be of much interest to the student, intern and resident in the modern hospital. In keeping with the present day regulations for the conservation of paper and other essential materials, it is interesting to note that there are more than 1,000 pages in a relatively small book, and subject material rarely seen in a single volume of any size.

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# Books Received

**The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.**

SAFE CONVOY. The Expectant Mother's Handbook. By William J. Carrington, A.B., M.D., F.A.C.S., Attending Gynecologist Atlantic City Hospital, Atlantic County Hospital for Nervous and Mental Diseases, Pine Rest Hospital, Atlantic City Munici-

(*Continued on page* 42)

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***Sulfathiazole***... 0.25-Gm. tablets (bottles of 50, 100, 500 and 1000).
***Sulfapyridine***... 0.5-Gm. tablets (bottles of 50, 100, 500 and 1000).
***Sulfanilamide***... 5-grain and 7½-grain tablets (bottles of 25, 100, 500 and 1000).

**SHARP & DOHME** *Philadelphia 1, Pa.*

## BOOKS RECEIVED (Continued)

pal Hospital and Atlantic Shores Hospital; Diplomate American Board of Obstetrics and Gynecology; Former Vice President, American Medical Association. J. B. Lippincott Company, Philadelphia. Price $2.50.

GASTRO-ENTEROLOGY: By Henry L. Bockus, M.D., Professor of Gastro-enterology, University of Pennsylvania Graduate School of Medicine. In three volumes, totaling about 2700 pages with about 900 illustrations, many in colors. Volume II — "Intestines and Peritoneum". 975 pages with 176 illustrations—12 in colors. W. B. Saunders Company, 1944. Philadelphia and London. Price — 3 Vols. and separate desk index, $35.00.

TRAUMATIC INJURIES OF FACIAL BONES: By John B. Erich, M.S., D.D.S., M.D., Consultant in Laryngology, Oral and Plastic Surgery at the Mayo Clinic, Assistant Professor of Plastic Surgery, The Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota; Diplomate of the American Board of Plastic Surgery; and Louie T. Austin, D.D.S., F.A.C.D., Head of Section on Dental Surgery at the Mayo Clinic. Associate Professor of Dental Surgery, The Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. In Collaboration with Bureau of Medicine and Surgery, U. S. Navy. 600 pages with 333 illustrations. W. B. Saunders Company, Philadelphia and London. 1944. Price $6.00.

MINOR SURGERY: (Fifth Edition) By Frederick Christopher, S.B., M.D., F.A.C.S., Associate Professor of Surgery at Northwestern University Medical School, Chicago; Chief Surgeon at the Evanston (Illinois) Hospital. Fifth Edition, Reset. 1006 pages with 575 illustrations. W. B. Saunders Company, 1944. Philadelphia and London. Price $10.00.

SYNOPSIS OF OBSTETRICS: By Jennings C. Litzenberg, B.Sc., M.D., F.A.C.S., Professor Emeritus of Obstetrics and Gynecology, University of Minnesota Medical School, Minneapolis. With 157 Illustrations Including 5 in Color. Second Edition. The C. V. Mosby Company, St. Louis. 1943. Price $5.00.

ORAL PATHOLOGY: Kurt H. Thoma, D.M.D., Second Edition. The C. V. Mosby Company, St. Louis. 1943. Price $15.00.

SYNOPSIS OF MATERIA MEDICA, TOXICOLOGY, AND PHARMACOLOGY: For Students and Practitioners of Medicine: By Forrest Ramon Davison, B.A., M.Sc., Ph.D., M.B., Formerly Assistant Professor of Pharmacology in the School of Medicine, University of Arkansas, Little Rock. Medical Department, The Upjohn Company, Kalamazoo, Mich. Third Edition. With 40 Illustrations, Including 4 in Color. The C. V. Mosby Company, St. Louis. 1944. Price $6.50.

AN ATLAS OF ANATOMY. In Two Volumes. By J. C. Boileau Grant, M.C., M.B., Ch.B., F.R.C.S. (Edin.), Professor of Anatomy in the University of Toronto. Volume II — Vertebrae and Vertebral Column, Thorax, Head and Neck. The Williams and Wilkins Company, Baltimore. 1943. Price $5.00.

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## DIABETIC IDENTIFICATION TAGS

At the suggestion of the Medical Division of the U. S. Office of Civilian Defense, to prevent dangerous delay in diagnosis and to insure proper treatment during unconsciousness or coma, Eli Lilly and Company, Indianapolis 6, Indiana, in co-operation with the American Diabetes Association, will provide metallic identification tags to be worn by diabetic patients or carried in the pocket. The inscription reads "DIABETIC, If Ill Call PHYSICIAN." No advertising of any sort appears on the tags, which will be supplied to the medical profession on request.

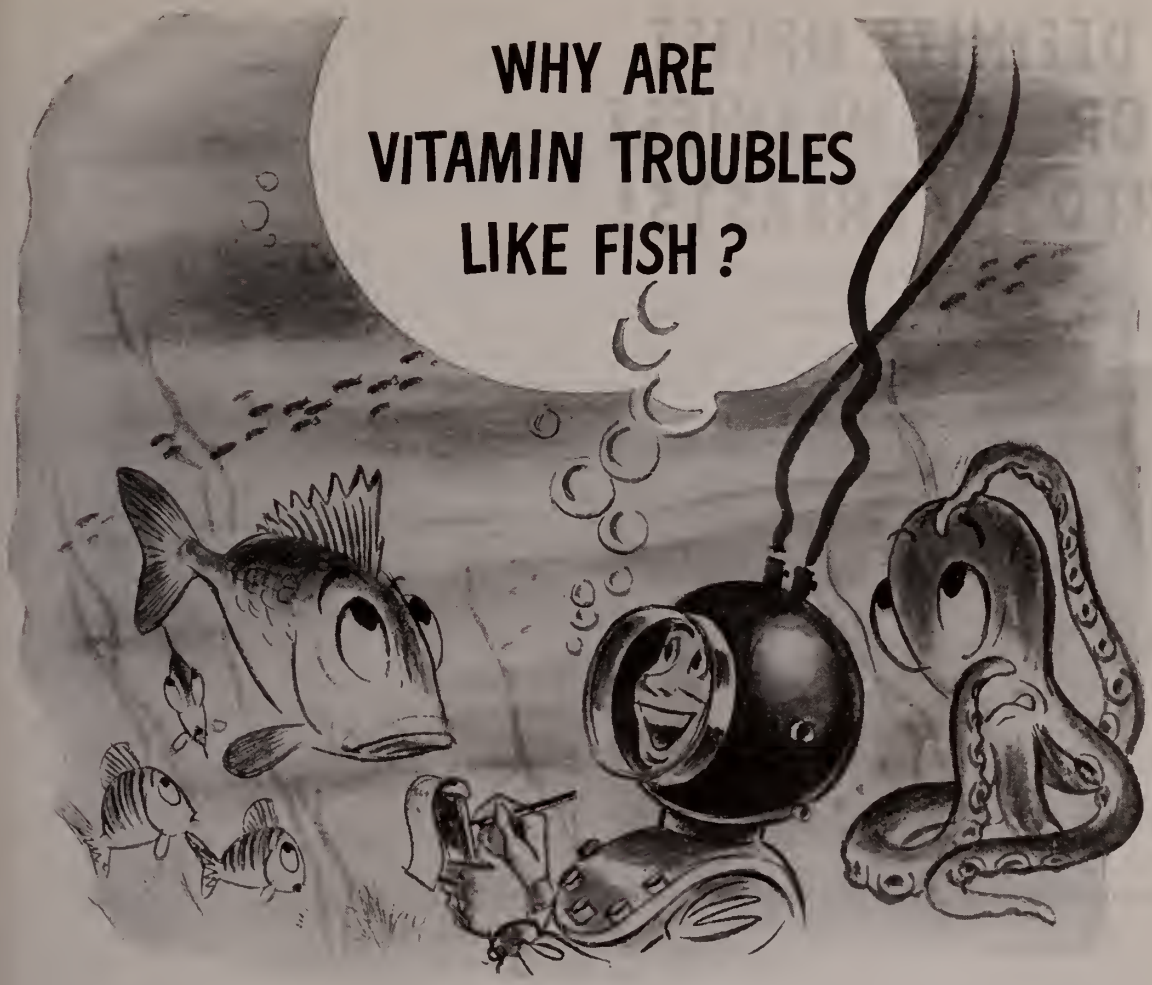
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## BURIED TREASURE

At the back of the junk shop there was a large case of books and I made my way towards it like a homing pigeon. I had to wade through what looked like the lumber of centuries—broken chairs, sandglasses, musical boxes, grandfather clocks, saddles and harness, a reaper's scythe. The ferocious looking old man who stood on guard gave me a look which I did not like, but left me to pick out the volumes, blow off the dust and turn over their leaves undisturbed. It was there that I made the bibliophilic find of my life. It was a small volume bound in a sort of golden calf, with fine but very opaque paper, and printed in an attractive variant of what we call the Pegasus type, with clear bold outlines and well-formed serifs. It seemed to be the product of a monomaniac with money to burn, or of some New Spelling Society. I opened it at random and read:

> "But it woz the abolishun ov the famili that led to the fienal solyooshun ov nyoorosis. Edyookaeshun woz taeken over bi a skild band ov chield therapists. Children wer no longer pamperd and dominaeted, and groo intoo adults without the restless dezier too pamper and dominaet utherz. The individyooal spirit kaem intoo its oen. Grandmutherli guvernments. . . ."

Turning to the title-page I read: *"A Ferst Priemer ov Siekiatri for Skoolz.* Bi Morgan Jenner Haycraft. The Lahnset Ltd., 2043." I showed it to the old man and asked how much. He gave it a glance and snatched it out of my hand. "Hey, you can't have that!" he said, "That's an advance copy. Not out yet." —*The Lancet, July* 31: 139, 1943.




MANY vitamin deficiencies, like fish, run in schools—more than one deficiency to a patient.

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| Vitamin A | 125% | 166% |
| Vitamin $B_1$ | 150% | 200% |
| Vitamin $B_2$ (G) | 100% | * |
| Vitamin C | 100% | 150% |
| Vitamin D | 250% | 250% |

*Requirements not established

(*Minimum daily requirements for Niacin Amide or need in human nutrition for Vitamin $B_6$ or Pantothenic Acid not established.*)

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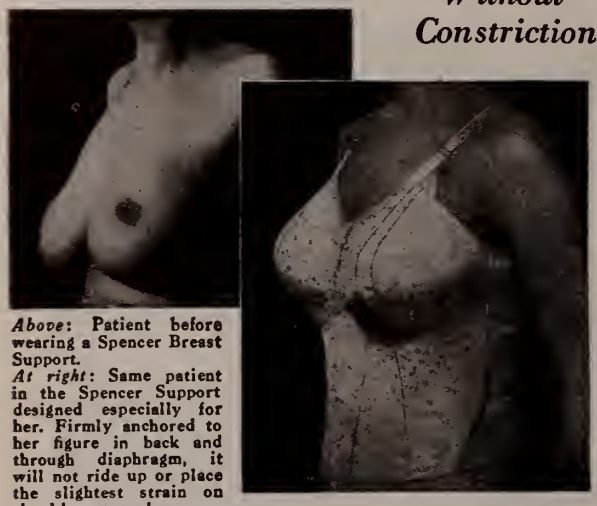
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## SAY TREATMENT OF HIGHLY FATAL HEART DISEASE SEEMS PROMISING

### Combined Use Of Penicillin And Heparin For Subacute Bacterial Endocarditis Apparently Successful, 4 Men Say

The apparently successful treatment by use of penicillin in conjunction with heparin, an anticoagulant, of 7 patients with subacute bacterial endocartis (inflammation of the membranous lining of the heart), a condition almost invariably fatal, is reported by Leo Loewe, M.D., Philip Rosenblatt M.D., Harry J. Greene M.D., and Mortimer Russell, Brooklyn, in *The Journal of the American Medical Association* for January 15.

"Further observation will be required to determine the permanence of results, but the immediate effects suggest uniformly successful sterilization of the blood and relief of clinical manifestations," the four men say.

The penicillin was given in requisite dosage by the method of the continuous intravenous (into a vein) drip but 1 patient also received it by injection into a muscle.

Heparin was deposited beneath the skin in most instances but occasionally was given by injection into a vein.

Six of the 7 patients suffered from a bacterial endocarditis that was engrafted on a chronic rheumatic inflammation of a valve of the heart (valvulitis), and the other had a congenital heart defect. In 5 of the 7 patients the organism causing the condition was a Streptococcus viridans; the sixth patient had a hemolytic streptococcus and the seventh a penumococcus type 27.

In a few of the patients the efficacy of the therapy may have been enhanced by the preliminary use of sulfonamide (given to all 7 patients).

"In experimental thrombotic (pertaining to a blood clot) bacterial endocarditis," the authors explain, "the disappearance of vegetations requires the use of a suitable chemotherapeutic agent and an anticoagulant. The clinical application of this principle in subacute bacterial endocarditis has been disappointing; the technics of therapy are cumbersome, the toxicity of treatment has been excessive even for an otherwise

(*Continued on page* 46)

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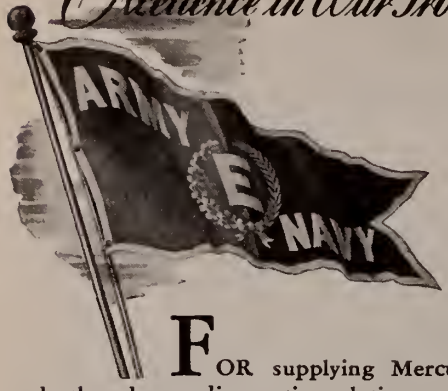
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## HEART DISEASE (Continued)

fatal disease and the successes have been few and irregular. Early efforts made with sulfonamides, with or without heparin, have been mostly abandoned. The introduction of penicillin proved equally disappointing; the commission appointed by the National Research Council has already reported unfavorably and discouraged the use of the present inadequate supply of the drug for the treatment of viridans endocarditis. . . ."

In the same issue of *The Journal* Louis N. Katz, M.D., Chicago, and Captain Stephen R. Elek, M.C., A. U. S., report that "In 4 cases of combined heparin and chemotherapy, either sulfonamides or sulfonamides and intensive arsenotherapy in the treatment of subacute bacterial endocarditis due to Streptococcus viridans, the results were entirely negative, no evidence of clinical recovery being seen. . . . In view of this experience and that of others reported in the literature, it is concluded that the further use of heparin in subacute bacterial endocarditis should be abandoned."

The sooner discriminatory practices are abolished and syphilis and gonorrhea regarded as other infectious diseases, the sooner will it be possible to realize the full benefits of recent scientific progress, Lieutenant Colonel Thomas B. Turner and Major Thomas H. Sternberg, M.C., A.U.S., say in *The Journal of the American Medical Association* for January 15.

---

During the last war someone asked General Pershing: "How far are we from the front?"

Pershing whispered, "Twelve miles."

Back down the ranks went the answer in a whisper until it reached a buck private.

The buck private whispered, "Why did he whisper?"

Back up the ranks again went the whispered question until a colonel walked up to General Pershing and said, "Why did you whisper?"

"Because," Pershing whispered, "I've got laryngitis."

—Stars and Stripes.

---

Mass X-rays and free treatment would wipe out tuberculosis in 15 years. I would like to see all of Canada's 140,000 civil servants X-rayed to detect tuberculosis in its incipient stages. J. J. Heagerty, M.D., Director, Public Health, Pensions and Health Dept., Canada.



# *In the Dietary Adjustment*

## DEMANDED BY FEBRILE DISEASE

During periods of acute febrile disease, dietary adjustment must be made to satisfy the change in nutritional demands. Protein requirements are increased 50 to 100 per cent, caloric expenditure is raised because of increased heat loss, and vitamin needs, especially those of the water-soluble groups, are greater. Only by meeting these altered requirements can recovery be hastened, and the period of convalescence shortened.

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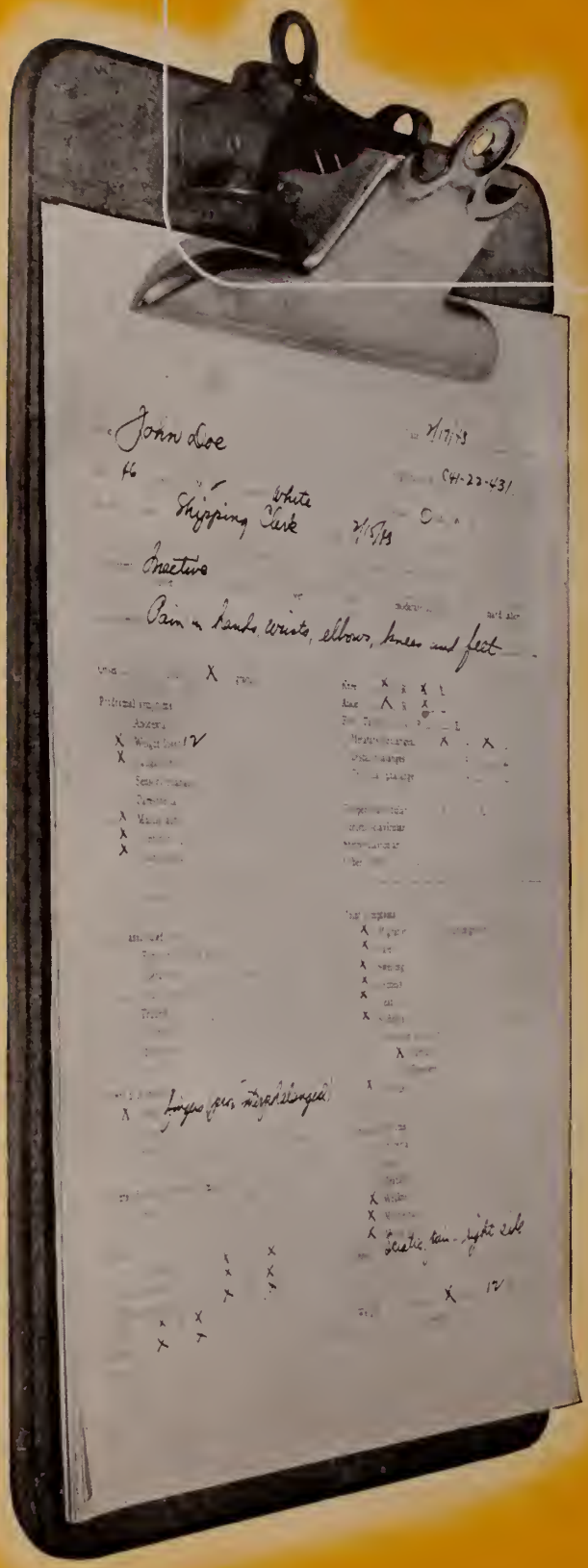
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## FOOD FOR OVERSEAS FORCES

The many problems of feeding the overseas troops of the United States are being successfully solved by the Quartermaster's Subsistence Research Laboratory, whose job is to make Army rations palatable and nutritious under adverse conditions of transportation and storage.

Four different types of field rations have been developed, known as Rations A, B, C, and D. Field Ration A is composed of both perishable and nonperishable foods, purchased, in part, in the area where the troops are stationed. In restricted areas troops are given Ration B, which is made up of sugar, salt, flour, and canned or dehydrated meats, fruits, and vegetables.

Where field kitchens can be used, "operational rations" are issued. Ration C, consisting of 6 cans of food, is the chief operational ration. Three of the cans, one for each meal, are identical — containing hard candy, special biscuits, sugar, and soluble coffee. The other three contain meat and beans, meat and vegetables, and meat and vegetable hash. Ration D, an emergency ration, is composed of three 4-ounce chocolate bars, reinforced with thiamine.

Another ration, designed for parachute troops, may replace Ration C. This is called Ration K and includes three moisture-proof and gas-resistant packages, each containing two kinds of biscuit, canned meat or cheese, a confection, a beverage concentrate, chewing gum, and four cigarettes. — *N. Y. Journal, Sept.* 1, 1943.

---

## DON'T GRUMBLE

If your legs are worn out paying calls — *don't grumble* — you are still walking on American soil.

If your patient gets to his appointment late — *don't grumble* — he may have ridden a bus to your office.

If you are bored with patients who abuse their digestive tracts — *don't grumble* — the O. P. A. will treat them for you.

If you are called out at night — *don't grumble* — picture the horse and buggy and dirt roads.

If the patients flock to you at all hours — *don't grumble* — remember the old days when you almost ran to meet a patient.

If a neurotic calls you on the telephone — *don't grumble* — at least you are saved the ordeal of looking at her.

If your secretary makes a mistake — *don't grumble* — think of the mistakes of yours which she hides.

If you miss your second cup of coffee — *don't grumble* — you had the first cup.

If the income tax hits you a mighty wallop — *don't grumble* — you are still privileged to pay in Uncle Sam's currency.

If you are forced to bed with sickness — *don't grumble* — think of the medicine you would have to take if you were one of your patients.

If you feel so tired you don't think you can last another day — *don't grumble* — Hitler is feeling the same way. — *J. South Carolina M. A.*

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## CARE ADVISED IN THE SUBSTITUTION OF METHYL CHLORIDE FOR FREON

A warning that extreme care should be used in substituting methyl chloride for Freon in refrigeration and air conditioning units is issued in *The Journal of the American Medical Association* for January 8 by the Association's Committee to Study Air Conditioning. The Committee is composed of Alvan L. Barach, M.D.,

It is pointed out that Freon, long used as the refrigerant of choice in some types of air conditioning and refrigeration, has become little available through military requirements. About the only other refrigerant that may be used in the same mechanism that formerly used Freon is methyl chloride, and even this requires some adaptation, such as involves valve changes and the elimination of aluminum and certain other less common metal parts. The Committee says that it may not be widely known that methyl chloride has injurious properties and that repeated exposures to small amounts at intervals such as one week apart may lead to cumulative damage. The gas is not only toxic, but also, under some circumstances, explosive.

"It is not the purpose of this concise statement to condemn the use of methyl chloride," the Committee declares. "Instead it is desired merely to indicate that the number of instances of methyl chloride poisoning may increase, and that physicians caring for patients employed about air conditioning or refrigeration enterprises should be alert to the emergencies, acute and chronic states that may be induced by methyl chloride under conditions not always certain to attract the attention of the work of patients themselves."

## TATTOOED MAN

A doctor examined a man in a hospital. As the man bared his chest he revealed tattooed portraits of Churchill, Stalin and Roosevelt.

"Want to proclaim your patriotism, eh?" said the doctor.

"Right," was the reply. "And you should see where I've got Hitler."

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## FIND SULFONAMIDES OF NO VALUE IN TREATMENT OF COMMON COLDS

### Investigators Favor, However, Their Use In A Few Selected Cases As Protection Against Severe Secondary Infection

"We are opposed to the routine use of sulfonamides in the treatment of the common cold but would favor their use in a few selected cases as a protection against severe secondary infection," Russell L. Cecil, M.D., New York; Major Norman Plummer, Medical Corps, Army of the United States and Wilson G. Smillie, M.D., New York, declare in *The Journal of the American Medical Association* for January 1. Their statement is based on results obtained in a study made to determine the effects of small doses by mouth of sulfadiazine on the bacteria in the nose and upper throat of persons suffering from an acute cold and to ascertain, if possible, the indications for the use of sulfonamide treatment in upper respiratory tract infection that frequently follows colds, estimating the benefits to be expected in such cases from this treatment.

Seventy-two colds in different persons were followed clinically and bacteriologically; 48 received sulfadiazine 3.0 grams daily by mouth for four days, while 24 served as controls.

Following sulfadiazine, the bacteria in the nose and upper throat as observed by serial cultures showed a uniform decrease in total number of organisms and a check in the growth of disease causing organisms.

"The clinical course of the treated colds showed no striking difference from that of the controls," the three investigators say; "however, there appeared to be some amelioration of symptoms due to control of secondary bacterial infection."

---

To cure the human body, it is necessary to have a knowledge of the whole of things.—*Hippocrates.*

in whooping cough

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## LESS SMALLPOX WHERE THE REQUIREMENTS FOR VACCINATION ARE MOST STRICT

"Vaccination prevents smallpox; every doctor knows this! Repetition is necessary because of public apathy and antivaccination movements," *The Journal of the American Medical Association* for January 29 says. "Public apathy results from the fact that smallpox has not in recent years appeared in serious form or in widespread or locally intensive or explosive outbreaks. The United States Public Health Service reports a sharp decrease in smallpox in the United States since 1931, especially during the years 1940 to 1942 inclusive. The service reports 'There still remains, however, a significant inverse correlation between the incidence of the disease and the rigorousness of the provisions of law or regulations regarding vaccination. This correlation is especially marked when the incidence rates are compared by states grouped according to the positiveness of their vaccination requirements.' The accompanying table shows incidence rates for smallpox by groups of states according to their vaccination requirements. Smallpox is obviously lowest in those jurisdictions where some type of universal routine vaccination requirement is in effect. Such studies as this are effective

*Average Smallpox Case Rates,* 1938-1941

| Group and States included | Annual Case Rate per 100,000 Population |
|---|---|
| 1. States (13, including the District of Columbia) requiring vaccination of pupils as a prerequisite to school attendance, regardless of the presence or absence of smallpox (Arkansas, Kentucky, Maryland, Massachusetts, New Hampshire, New Mexico, New York, Pennsylvania, Rhode Island, South Carolina, Virginia, West Virginia, District of Columbia) | 0.8 |
| 2. States (6) in which vaccination of pupils may be required at all times (Connecticut, Georgia, Maine, New Jersey, Ohio, Oregon) | 3.0 |
| 3. States (10) having various permissive provisions regarding vaccination (Alabama, Colorado, Connecticut, Georgia, Kansas, Michigan, Mississippi, North Carolina, Tennessee, Wyoming) | 3.6 |
| 4. States (12) having varying provisions which direct or authorize the exclusion of unvaccinated persons from school only when smallpox is present or threatened (Arizona, Iowa, Kansas, Louisiana, Minnesota, Montana, Nebraska, New York, North Carolina, Oregon, Texas, Wisconsin) | 6.3 |
| 5. States (9) which have no important laws or regulations promoting or effiacious in achieving the application of vaccination of the population (Delaware, Florida, Idaho, Illinois, Indiana, Missouri, Nevada, Oklahoma, Vermont) | 11.1 |
| 6. States (7) having various prohibitive provisions regarding the requirement of smallpox vaccination (Arizona, California, Minnesota, North Dakota, South Dakota, Utah, Washington) | 13.2 |

refutation of claims made by groups opposed to vaccination that vaccination is available for those who want it and no one else should be compelled to have it. In those areas where vaccination requirements are lax the people will continue to pay the price for needless prevalence of a completely preventable disease."

## SAY PAINLESS CHILDBIRTH METHOD HAS ANOTHER IMPORTANT BENEFIT

### Caudal Analgesia Reduces Time For Third Stage Of Labor And Amount Of Blood Lost, Two Physicians Report

"One of the outstanding benefits to a patient who is delivered under caudal analgesia [the painless childbirth technic announced a year ago] is the prompt termination of the third stage of labor and the amazingly small amount of blood lost," Norris W. Vaux, M.D., and Robert M. Mitchell, M.D., Philadelphia report in *The Journal of the American Medical Association* for February 26.

Dr. Vaux is Professor of Obstetrics, Jefferson Medical College, and Director, Division of Obstetrics and Gynecology, Philadelphia Lying-in and Woman's Department of the Pennsylvania Hospital. Dr. Mitchell is Assistant Surgeon (R), United States Public Health Service.

"Strictly speaking," the two physicians explain, "the duration of the third stage of labor is from the birth of the child to the birth of the placenta in toto [the placenta is the organ within the womb which established communication between the mother and the child by means of the umbilical cord]. Some men have extended this period to include the time needed for complete involution [return to normal] of the uterus [womb]; but, from a practical point of view, the third stage of labor should include at least the first hour post partum. It is in this period following delivery of the baby and in the first hour following delivery of the placenta that intrauterine [within the womb] bleeding occurs as a result of poor uterine muscle tone and that the aptly termed 'accidents of the third stage' occur. . . ."

The authors point out that it has been said that "more women die from accidents of the

(*Continued on page* 56)

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CHILDBIRTH (Continued)

third stage of labor than during the other two combined."

They report that blood loss determinations of 1,000 cases of delivery under continuous caudal analgesia and anesthesia revealed an average of 110.75 cubic centimeters as compared with an average of 192.62 cc. in a series of 1,000 cases of delivery under inhalation anesthesia. In the former group about 10 per cent more patients completed the third stage of labor in fifteen minutes or less than under inhalation anesthesia. There were but 2 instances of a third stage of labor prolonged beyond thirty-one minutes under continuous caudal analgesia and anesthesia as compared with 17 instances under inhalation anesthesia.

The incidence of "trapped" placenta, requiring manual extraction, in the 1,000 cases delivered under continuous caudal analgesia was 0.1 per cent whereas in the inhalation anesthesia group there were 6 instances in which manual removal was necessary.

The authors also say that the bleeding of muscles of the womb when incision is made for delivery by cesarean section is decidedly diminished when continuous caudal analgesia and anesthesia is used.

They conclude that "It is believed that continuous caudal analgesia and anesthesia in obstetrics enables the uterus to approach its normal mechanism more closely."

---

Reporting a case of identical twin brothers identically complicated duodenal ulcers at the same period of life, Gordon McHardy, M.D., and Donovan C. Browne, M.D., New Orleans, declare in *The Journal of the American Medical Association* for February 19 that these two cases would seem to confirm the theory of constitutional predisposition. They say they believe their report is the first one of a duodenal ulcer occurring in one or both of identical twins.

---

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## KELLOGG FOUNDATION GRANTS $35,000 FOR POSTWAR STUDY

The Board of Trustees of the Kellogg Foundation, meeting December 21, voted a grant of $35,000 for study by the Post-War Planning Committee of the American Hospital Association of the post-war hospitalization needs of America. The worth of this project had already been recognized by a grant of the same amount from the Commonwealth Fund, contingent upon securing the balance of the $100,000 two-year budget from other sources. The Board of Trustees of the American Hospital Association has voted $15,000 this period.

The research of this two-year program will seek to determine the adequacy of distribution of present hospital facilities and the best method of insuring adequate hospital care for all citizens. While existing data will be utilized to the fullest extent, conclusions on a nation-wide basis require surveys on a more detailed scale. Recommendations for post-war hospital needs must be considered in the light of racial and climactic differences, relative standards of living, and other varying factors which need analysis.

The American Hospital Association and the Trustees of the Kellogg Foundation are in accord as to the urgency of the need of this project; and at the earliest possible date the study commission will be formed and program will be initiated. The present heavy utilization of hospitals has lead many of the boards of trustees of hospitals to plan an extension of hospital services in the immediate post-war future; and legislation directed to establish the method of payment for hospital service on a compulsory basis has been introduced in Congress. This general interest in the functions and facilities of hospitals indicates the necessity of a comprehensive study which will make available expert consultation and statistics related to the individual hospital, the community, and the nation.

---

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## WARNS THAT INFLUENZAL MENINGITIS IS POTENTIALLY CONTAGIOUS

A warning that influenzal meningitis is a potentially contagious disease despite general beliefs to the contrary is contained in a report in *The Journal of the American Medical Association* for February 19 by A. J. Hertzog, M.D.; Isabell Logan Cameron, M.D., and A. E. Karlstrom, M.D., Minneapolis.

The three physicians report the cases of two brothers fatally stricken with the disease. The older, aged 4 years, died within twenty-six hours after onset of the disease and the younger, aged 2 years, became ill two days later and died within fifteen hours.

"These cases," the authors say, "show that it is possible to have more than one child in a family contract influenzal meningitis and that the disease is potentially contagious. If other young children are present in a family where influenzal meningitis has occurred, prophylactic doses of sulfadiazine or passive immunization would seem indicated. . . ." They explain that according to a previous investigator the incubation period of the disease is less than five days.

"The method of spread of influenzal meningitis," the Minneapolis physicians explain, "is not well understood. The usual sporadic nature of the disease suggests carriers as a possible source of infection. In our cases, nose and throat cultures taken by the Minnesota Department of Health from parents and other contacts were negative for Haemophilus influenzae (the causative organism). The tendency to affect infants and young children almost exclusively suggests that the average adult is immune to the disease. . . ."

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## STREPTOCOCCIC DISEASE IN A COMMUNITY

Reporting a study in an army camp in which was determined the incidence of scarlet fever due to various strains of hemolytic streptococci, Morton Hamburger, Jr., M.D., Field Director of the Army Medical Department's Commission on Air-Borne Infections, and Carolyn H. Hilles, M.S.; Virginia G. Hamburger, B.S.; Margaret A. Johnson, M.S., and Joanna G. Wallin, B.S., Camp Carson, Colorado, point out in *The Journal of the American Medical Association* for February 26 that "The establishment of the relative ability of various strains of hemolytic streptococci to produce scarlet fever is of considerable epidemiologic importance. Scarlet fever is a reportable disease in practically all communities whereas other forms of streptococci disease are not. If the ratio of cases of scarlet fever to the total cases of streptococcic pharyngitis-tonsillitis can be established for the various serologic types, a yardstick will be available for the estimation of the total amount of streptococcic disease in a community during a given season. The information provided by such estimations would be of great value in the study of the epidemiology of rheumatic fever and other conditions associated with the hemolytic streptococcus. . . ."

---

Medicine is not only a science; it is also an art. It does not consist of compounding pills and plasters; it deals with the very processes of life, which must be understood before they may be guided.—*Paracelsus*: *Die Grosse Wanderartzney*, 1530.

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VOL. 85 NO. 4

*April, 1944*

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ANNUAL MEETING ILLINOIS STATE MEDICAL SOCIETY
PALMER HOUSE, CHICAGO, MAY 16, 17, 18, 1944

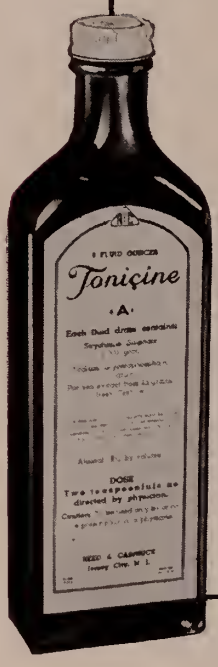
## Observation on the Clinical Application of Diasone in Human Tuberculosis

(See page 31 for Table of Contents)

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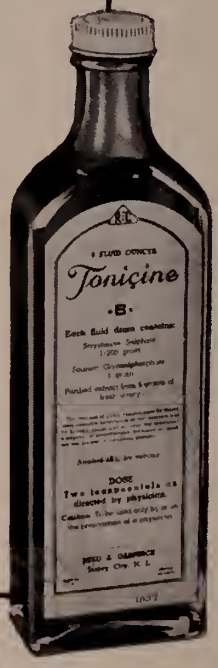
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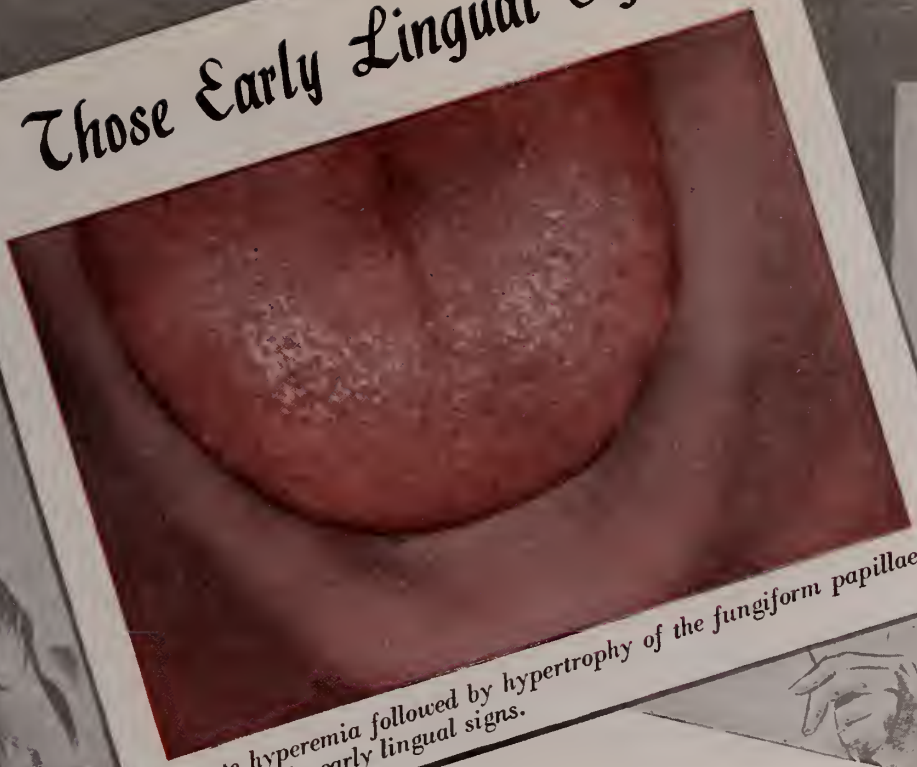



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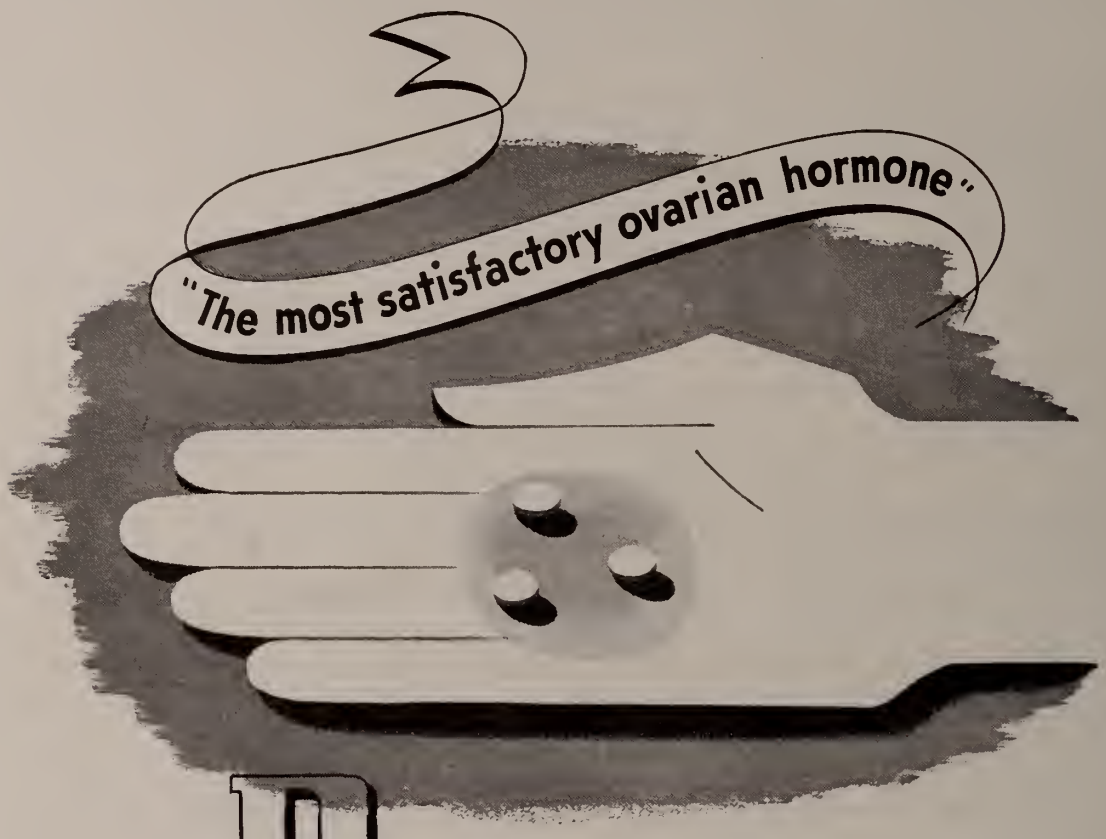
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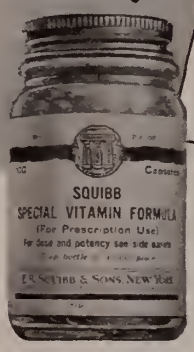
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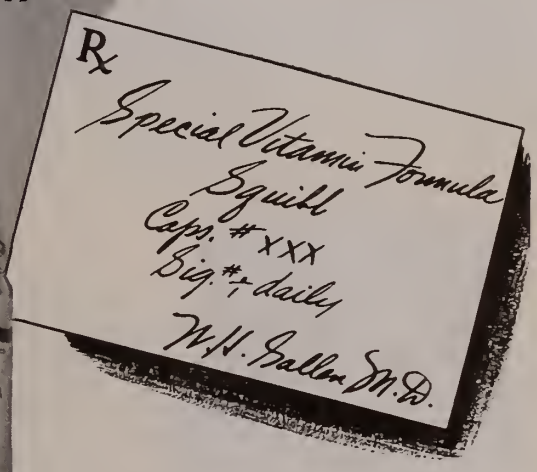
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[1] National Research Council, Reprint and Circular Series No. 115, Jan. 1943.

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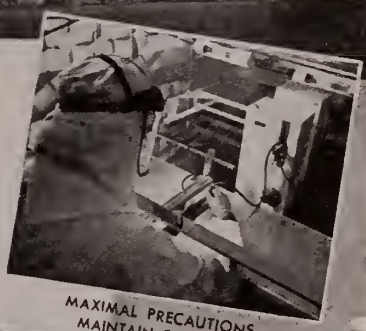
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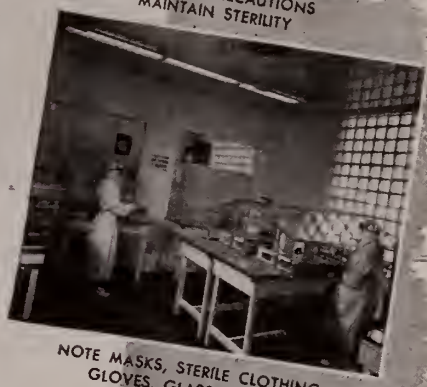
product upon the integrity of which the physician so often may have to stake his patients' lives. Rigid laboratory controls assure for Penicillin-C. S. C. uniform potency, sterility, and freedom from pyrogens.

Thus Commercial Solvents Corporation brings to the manufacture of penicillin not only outstanding production facilities, but also the knowledge born of a quarter century of research and actual experience, in a field not only difficult but largely unexplored by the pharmaceutical industry in general.

The capacity of the C. S. C. penicillin plant is conservatively rated at 40,000,000,000 (forty billion) Oxford Units per month. But for the time being its entire production must go to our armed forces. When their needs are met, Penicillin-C. S. C. will be available for civilian medical practice, not only in adequate distribution throughout the United States, but also at the reasonable cost to the patient which is every physician's desire, and which is made possible by C. S. C. volume production.



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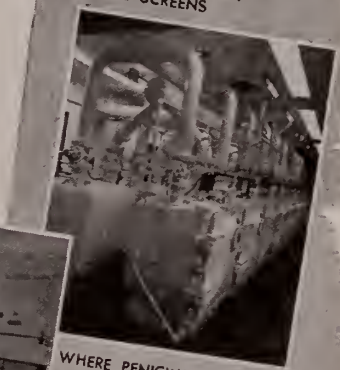
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PHARMACEUTICAL DIVISION

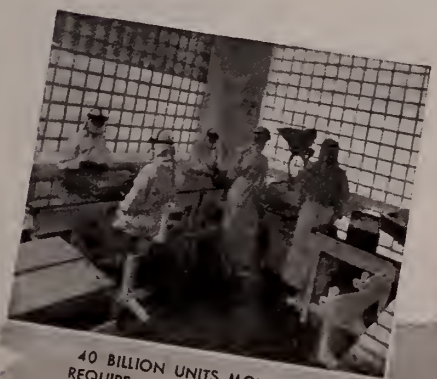
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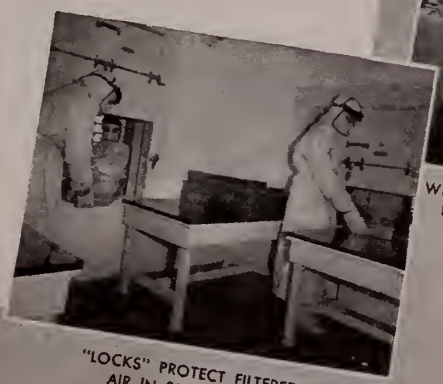
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*WOLDMAN, E. E., and POLAN, C. C.: The Value of Colloidal Aluminum Hydroxide in the Treatment of Peptic Ulcer; A Review of 407 Consecutive Cases, Am. J. M. Sc. *198:* 155-164 (Aug.) 1939.



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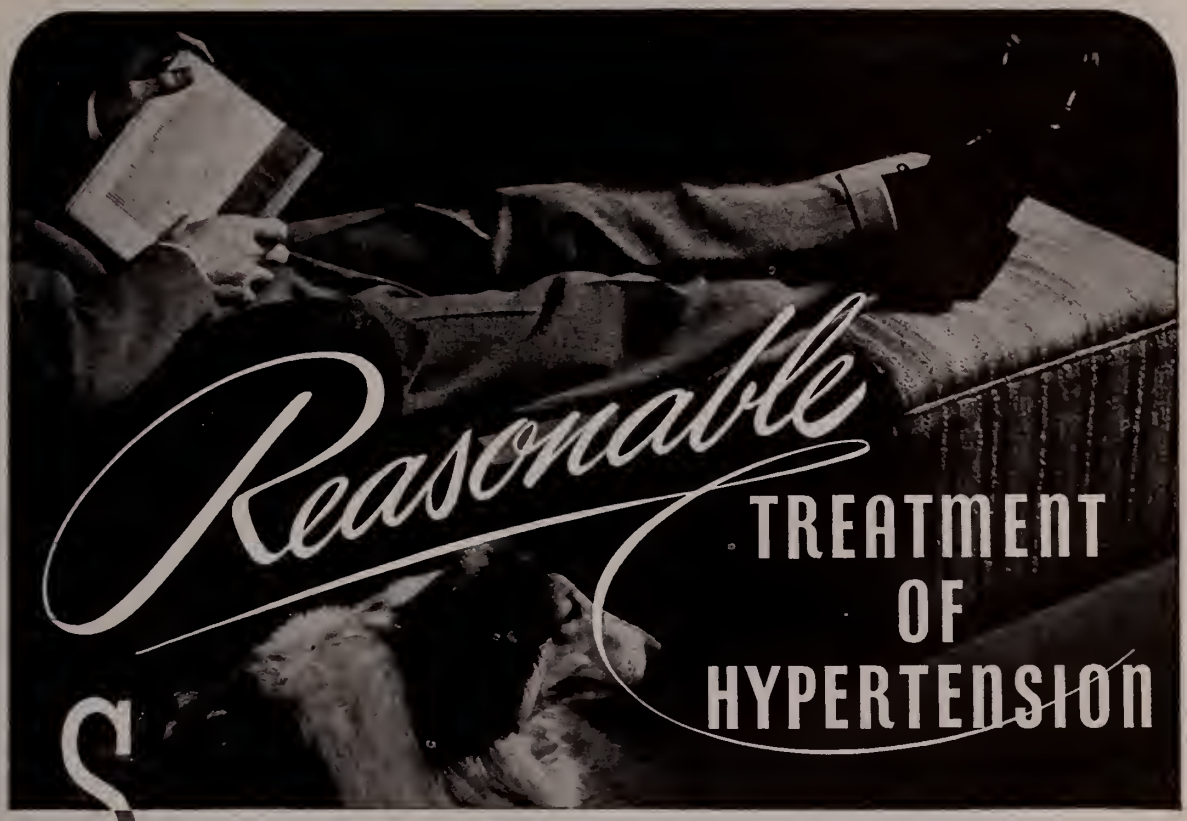
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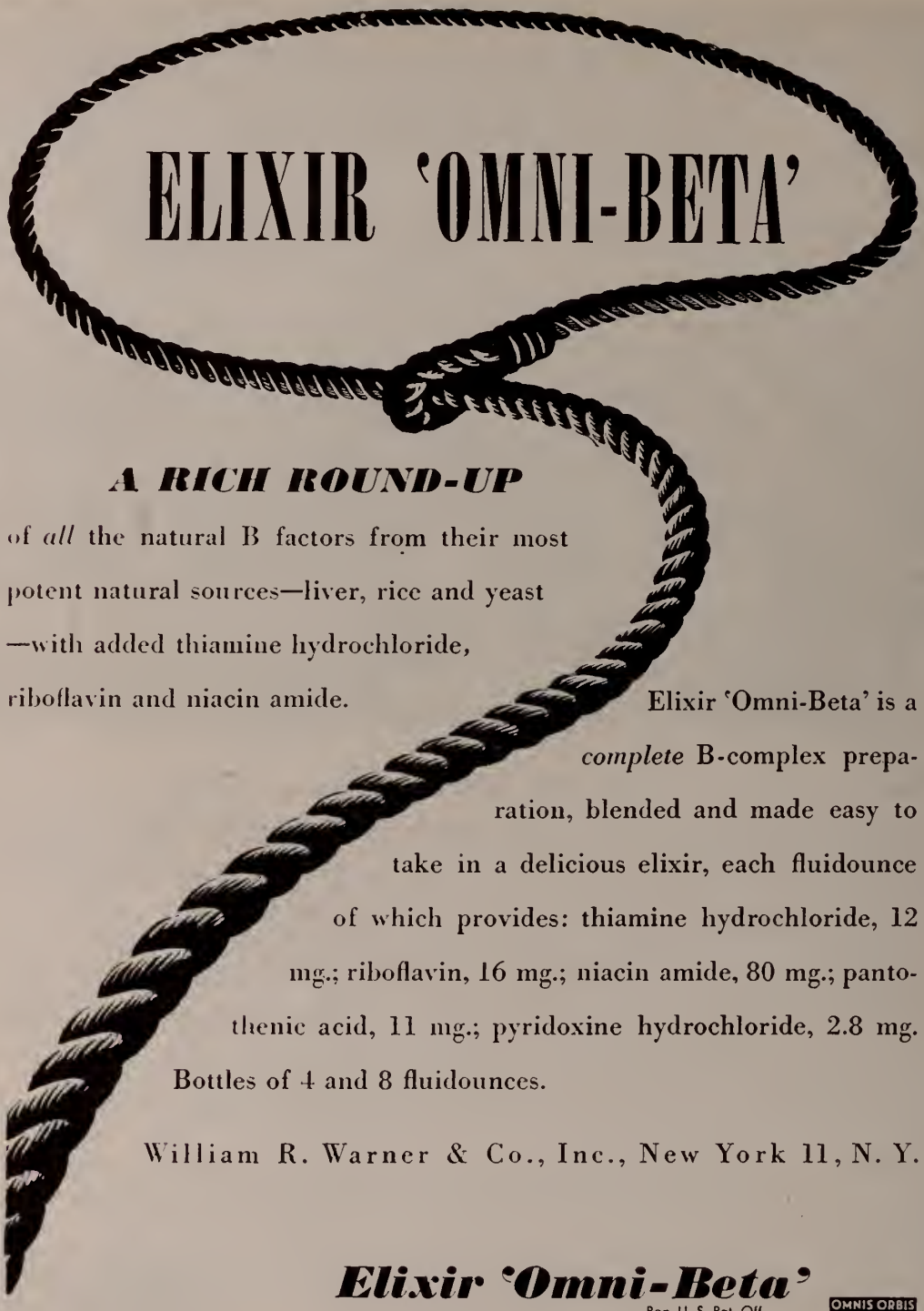
**DOSAGE:** The customary dose of Theominal is 1 tablet two or three times daily; when improvement sets in the dose may be reduced. Each tablet contains theobromine 5 grains and Luminal* ½ grain.

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Ciba Pharmaceutical Products, Inc. salutes the men in the Medical Services of the United States as well as those in civilian forces responsible for health "behind the lines."

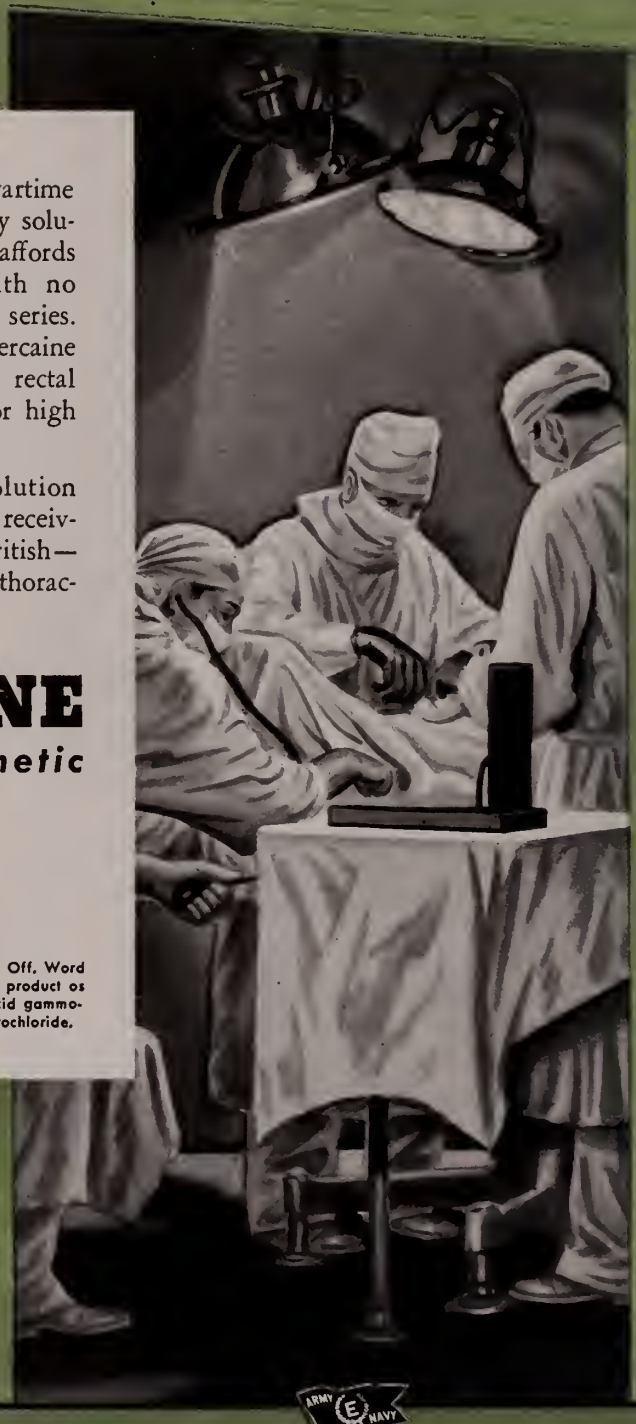
## A Father of the Army Dental Corps



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## NUPERCAINE

***a long-acting anesthetic***

[1] Clement, F. W.; Elder, C. K.: Anesthesiology, 4:516, September, 1943.

[2] Forsee, J. H.; Shefts, L. M.; Burbank, B.; Fitzpatrick, L. J.; Burford, T. H.: J. Lab. & Clin. Med., 28:418, January, 1943.

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*Trade Mark Reg. U. S. Pat. Off. Word "Nupercaine" identifies the product as alpha-butyloxycinchoninic acid gamma-diethylethylenediamide hydrochloride.

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Camel, they say . . . for extra mildness, for rare good taste. Camel, for those precious moments of relaxation when a fighting man looks to his cigarette for richly earned comfort.

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New reprint available on cigarette research—Archives of Otolaryngology, March, 1943, pp. 404-410. Camel Cigarettes, Medical Relations Division, One Pe shing Square, New York 17, N. Y.




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. . . through BREWERS YEAST ENZYMATIC ACTION*

**RESTORES NORMAL INTESTINAL MOTILITY**
. . . with COMPLETE NATURAL VITAMIN B COMPLEX*

This twofold natural therapy restores normal bowel function *without* catharsis, artificial bulkage or large doses of mineral oil. Cannot affect vitamin absorption. Avoids leakage.

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*ZymenoL contains Pure Aqueous Brewers Yeast (no live cells)

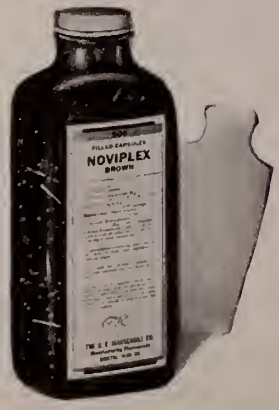
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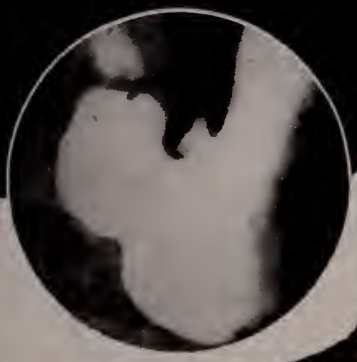
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ACUTE AND CHRONIC GASTRITIS

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**SYNTROPAN 'ROCHE'**

**NON-NARCOTIC ANTISPASMODIC**



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SPECIALIZED
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*In addition to our Professional Liability Policy for private practice we issue a special*
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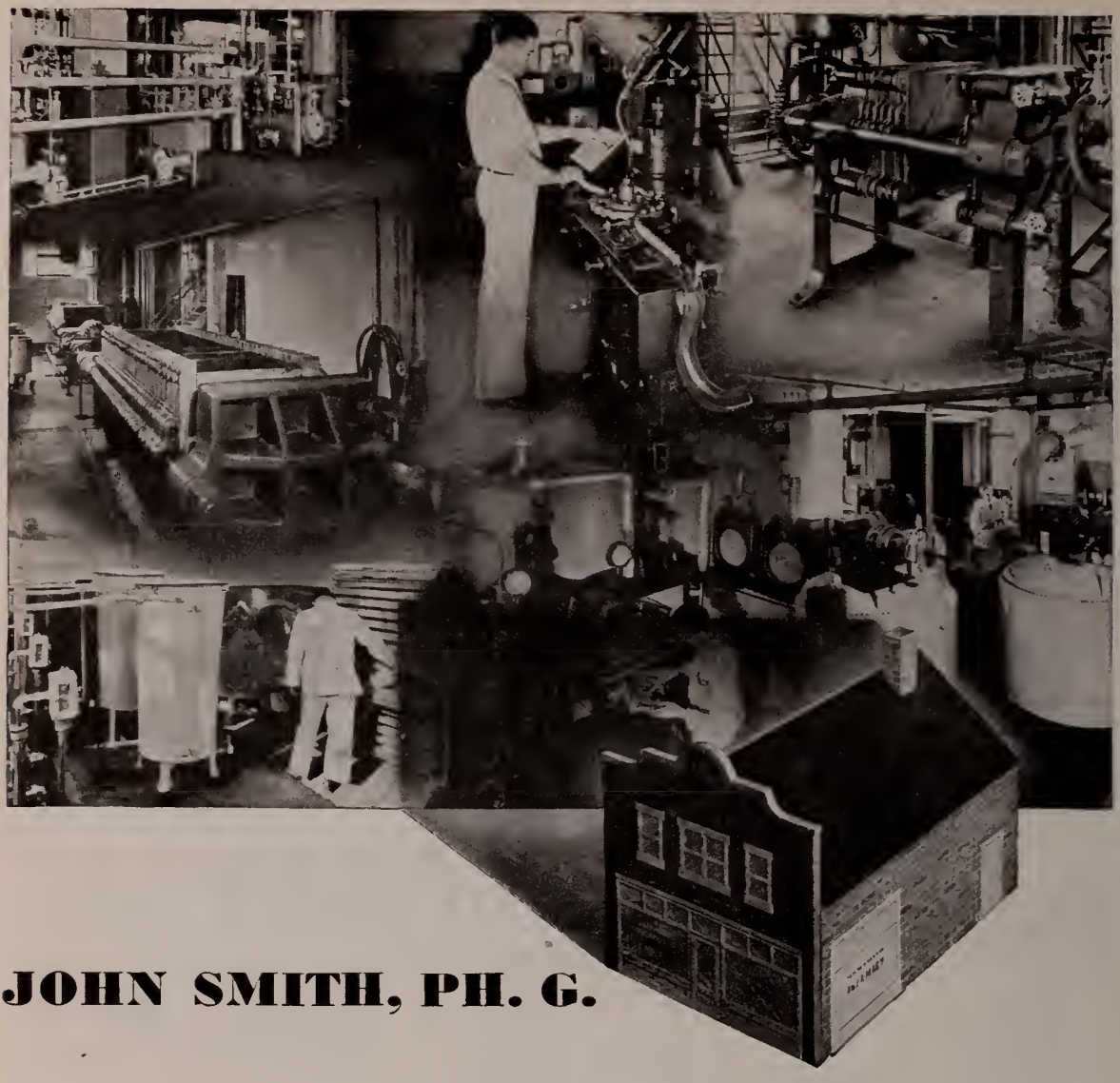
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*BUY WAR BONDS FOR VICTORY*

The Illinois Medical Journal

April, 1944

VOL. 85, NO. 4

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Harry Culver, Walter Stevenson, Raymond W. McNealy.

# Editorials

## IN MEMORIAM

GEORGE WASHINGTON POST, M.D.
1884-1944

George Washington Post, President of the Illinois State Medical Society passed away suddenly on the evening of March 2, 1944, his death occurring in front of his office in Chicago. Doctor Post had not been well for several months, having had repeated attacks of a cardiac ailment, yet he carried on until the last, being one of those individuals who disliked a life of inactivity.

Doctor Post, son of Doctor George W. Post and Mary Elizabeth (Goodrich) Post, was born in Milton, Wisconsin, August 26, 1884. He was educated in the public schools in Chicago, Alfred (N.Y.) Academy and University, received his B.S. degree from Milton College in 1905, and was graduated from the University of Illinois College of Medicine in 1909. Following the completion of his interneship, he entered into partnership with his father in Chicago, remaining in practice in this city until his death.

In 1912 he had special training in Vienna, and again in 1914 went to Germany where he had intensive training in surgery. Upon his return to Chicago he became affiliated with his Alma Mater as an instructor, then in turn became an associate, assistant professor of surgery, and in 1930 became associate professor of surgery in that institution. In his earlier years of practice he was a member of the staff of St. Anne's Hospital. Later he became a staff member at the West Suburban Hospital where he worked until his death.

He was always interested in medical society activities, becoming a member of the State Medical Society soon after his graduation, then a Fellow of the American Medical Association and a Fellow of the American College of Surgeons. He was elected President of the Chicago Medical Society in 1937, and President-Elect of the Illinois State Medical Society in 1942, becoming president of this Society in May of 1943. He was a regular attendant at all meetings of his State Society and of the Council, as well as many conferences held both in Chicago and elsewhere, having an unusual desire to participate in every way possible whenever medical men get together.

Doctor Post was a Past Master of the Austin Lodge of A.F. & A.M., and a member of Medinah Temple (A.A.O.N.M.S.) Medical Corps, having had an unusual interest in the Masonic Fraternity over a period of many years. He is survived by his mother, Mrs. Mary E. Post, his wife Agnes Fisher Post, a son Doctor George W. Post IV, a daughter Mrs. Barbara Post Fromm, a brother Charles E. Post, and four sisters, Mrs. Anna Post Bergh, Mrs. W. D. Bliss, Mrs. W. F. Stewart and Mrs. M. D. Davis. Doctor Post was a member of the Chicago Seventh

Day Baptist Church, always maintaining an unusual interest in the affairs of his church.

Although not well in recent months Doctor Post was looking forward to an unusually interesting annual meeting of the Illinois State Medical Society at which he would have been presiding officer. He invariably attended conferences of all groups which gathered to formulate plans for a successful annual meeting, and on several occasions was present against the advice of friends who were familiar with his condition.

Likewise, realizing that with so many Illinois physicians now with the armed forces it was necessary for those remaining in civilian practice to carry on, work longer hours, see more patients and take less time off, he was determined to do his share of the work. On several occasions he was sent to the hospital for rest and proper treatment, but insisted on leaving at the earliest possible moment. These activities no doubt did shorten his life, but in commenting on the subject with relatives and friends, Doctor Post stated that he did not want to become an invalid and would rather die in service than to lead a life of invalidism or be compelled to give up the work which he had been doing over a long period of years.

George Post was well known to the physicians of Illinois and to many in adjoining states as he was a frequent attendant of medical meetings throughout the country. He had made a host of friends through these associations, and he will be missed greatly.

Through his passing the Illinois State Medical Society lost not only a loyal and competent president but also a member who had in mind at all times the natural traditions and tenets of a successful physician interested in the welfare of both his patients and his fellow members of the medical profession.

## IN MEMORIAM

JOHN STEPHAN NAGEL, M.D.
1874-1944

On Thursday morning, March 2, 1944, John S. Nagel, known to all physicians in Illinois as a member of the Council of the Illinois State


## ILLINOIS STATE MEDICAL SOCIETY

### GENERAL OFFICERS, 1943-1944

PRESIDENT ..... GEORGE W. POST,* Chicago
PRESIDENT-ELECT .... EVERETT P. COLEMAN, Canton
1ST VICE-PRESIDENT .. ROBERT S. BERGHOFF, Chicago
2ND VICE-PRESIDENT ..... WADE HARKER, Chicago
SECRETARY-TREASURER .. HAROLD M. CAMP, Monmouth

### THE COUNCIL

| | | |
|---|---|---|
| L. J. Hughes | 1st District, Elgin | 1944 |
| E. C. Cook | 2nd District, Mendota | 1944 |
| J. S. Nagel* | 3rd District, Chicago | 1946 |
| Percy E. Hopkins | 3rd District, Chicago | 1944 |
| E. W. Mueller | 3rd District, Chicago | 1945 |
| Chas. P. Blair | 4th District, Monmouth | 1946 |
| Ralph P. Peairs | 5th District, Normal | 1946 |
| Walter Stevenson | 6th District, Quincy | 1945 |
| I. H. Neece | 7th District, Decatur | 1946 |
| C. E. Wilkinson | 8th District, Danville | 1946 |
| Andy Hall | 9th District, Mt. Vernon | 1945 |
| G. C. Otrich | 10th District, Belleville | 1945 |
| Ed. S. Hamilton | 11th District, Kankakee | 1944 |
| Edward H. Weld | At Large, Rockford | 1946 |
| Chas. H. Phifer | At Large, Chicago | 1945 |
| J. S. Templeton | At Large, Pinckneyville | 1944 |

Chairman of the Council ..... Percy E. Hopkins

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*Deceased

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George W. Post, M.D.
1884-1944



John S. Nagel, M.D.
1874-1944

Medical Society for a period of 25 years, and always prominent in the several medical organizations to which he belonged, passed on from his earthly toil to eternal rest.

Doctor Nagel was born at Reynolds, Indiana, January 6, 1874. After finishing high school he went to Valparaiso University where he was graduated in Pharmacy about 1893. After practicing as a pharmacist for a short time, he entered the College of Physicians and Surgeons, Chicago (later the medical department of the University of Illinois) from which school he graduated in 1898. He served as Captain with the First U. S. Cavalry for 15 months in the Philippine Islands during the Spanish American War.

For several years he taught in the Genito-Urinary Department at the old Chicago Medical School (later affiliated with Loyola University). He was on the staff of the West Side Hospital for a number of years, and for years was a member of the staff of the Garfield Park Hospital. He was a member of the American Board of Urology, which specialty he practiced for many years.

Early in 1919 Doctor Nagel became a member of the Council of the Illinois State Medical Society, a position he retained until his death. In keeping with his unusually modest tendency, his record in the Council has been most unique indeed.

The records show that during his first year as a member of this organization, he did not make or second a single motion, but was a patient listener. He never aspired to the higher offices which he could have held as he was asked many times to permit his name to be presented for the office of President-Elect of his State Medical Society, and on many occasions he was urged to accept the chairmanship of the Council. But like a famous Yankee president, he "did not choose to run."

For many years he was chairman of the Council Finance Committee and was always interested in conserving the funds of his Society. As a result of his endeavors, provisions were made for the annual audits of all society funds by a certified public accountant; the presentation of bills properly itemized on suitable voucher cards; payment of necessary expenses of our Delegates

to the American Medical Association; recommendations approved by the Council that officers of the State Medical Society and its Councilors not give political endorsements on official stationery, as was frequently done in the past.

Some fifteen years ago Doctor Nagel first began to discuss the possibility of the State Medical Society either purchasing a home for disabled physician members or their widows, or developing a Medical Benevolence plan whereby incapacitated members or their widows would receive monthly benefits when lacking funds to procure the necessities of life. He discussed this before the Council and the House of Delegates repeatedly until it was approved by the House four years ago and the present plan was placed in operation.

As chairman of the Committee on Medical Benevolence, Doctor Nagel invariably was eager to see that no former member of this Society or the widows of former members, failed to get proper consideration if they were in need. At meetings of the Council he would ask individual members to discuss the subject before medical societies in their district so that perhaps some worthy cases might be discovered.

Although the Medical Benevolence plan in the Illinois State Medical Society functions through appropriations from the treasury of the Society, Doctor Nagel was looking forward to the day when a permanent endowment fund could be created so that the income would care for all benefits, similar to the plan in operation over a long period of time in Pennsylvania.

With his sudden passing, what could be more appropriate to his memory than to stimulate within the Illinois State Medical Society, the development of a permanent endowment fund for medical benevolence to start what he has suggested for so many years! No doubt many members of the Society would be anxious to donate money to such a fund and it is quite probable that other philanthropic individuals outside the medical profession would be willing to aid in endowing a fund for such a worthy purpose.

John Nagel for many years has been considered the instructor of new members of the Council. Almost invariably younger members would seek his advice and refer problems arising within their respective districts to him for suggestions as to proper solution. He would always take time to render all possible aid, and his suggestions were highly appreciated and aided materially in the settlement of the individual problems.

Taken from us at a time when his counsel was needed most, he will be missed by all. A familiar figure on the front row at every annual meeting of the House of Delegates, he remained until every meeting was over, never missing any discussions or statements made before that body. He will be missed by thousands of Illinois physicians for years to come, and his memory will remain with us always.

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## WHY NOT IN ILLINOIS?

During the past few years the role of plasma in combating shock, hemorrhage, and its use in other fields, has been in a great measure responsible for a marked improvement in the mortality statistics in the United States. Unfortunately on account of the expense in connection with the procurement and processing of blood and its subsequent handling it has not been available in many communities where many times it would have been of much value in the treatment of many conditions.

The Illinois Department of Public Health has had a limited quantity of plasma available for emergency use, especially for civilian defense purposes. Although primarily intended for specific uses, it could be available in any emergency where other plasma is not at hand.

A plan recently adopted in Michigan has come to our notice, and it is one which we believe should be used in Illinois and all other states, especially where the supply of plasma is limited and not available in emergencies in all parts of the state. According to C. C. Young, Director of the Bureau of Laboratories for the State Health Department, the free plasma service solves a problem which has bothered many medical men, especially in sparsely settled areas. Under the Michigan Plan, free plasma is available to all physicians of that State without regard to the patient's ability to pay for it.

Under the Michigan Plan the initial number of units of plasma credited to a participating community is determined by the donor response from that particular county or community. Blood is taken from donors, sent to the state laboratory for processing, then a small debit is

taken for OCD and state emergency use, and the remainder sent to the community from which the blood was procured. Under a replacement schedule, additional plasma is returned to the communities in proportion to the amount of blood procured, thus permitting the retention of a plasma supply to suit community needs.

It is hoped that a similiar or some other satisfactory plan will be adopted in Illinois in the near future so that no one anywhere within the state needing plasma will be denied its life-saving qualities when its use is actually indicated.

## WHAT GOVERNOR BRICKER THINKS OF AMERICAN MEDICINE

Governor John W. Bricker of Ohio made on interesting address before the Creve Coeur Club in Peoria at that organization's annual Washington's birthday banquet on February 22, 1944. Although not mentioning the Wagner-Murray-Dingell Bill by name, he left no doubt as to the legislative proposal he had in mind when he stated that certain proposals now before Congress would be a distinct threat to the future health of our people.

He stated that the Federal Government is charged with "extreme busy-bodying and meddlesomeness in many affairs which should be left to the people themselves," and that in his opinion "our institutions of free government are threatened as never before," because of existing bureaucratic, paternalistic and dictorial policies and trends.

Governor Bricker said "The American doctors have made eminent progress in caring for the health of our people. Medical organizations and private hospital groups are making substantial progress toward the goal of providing adequate medical and hospital care for all. In view of this record I regard the proposals emanating from this administration for governmental intervention between the doctor and his patient as an undeserved affront to a loyal and admirable profession, and a distinct threat to the future health of our people. It is these meddlesome activities in so many spheres that properly belong to the states or to the people themselves that have led to the multiplicity of government agencies which are unsupervised and uncontrolled, and which it is impossible to supervise or control."

He stated further, "Please do not misunderstand me. Government must be responsive to the needs of social progress in every field. It must continue to be. Human welfare means more than good intentions and material help. It must promote education, health and public welfare. But it must leave to individual human beings a full measure of control over their own destiny. Governmental management and regimentation invariably lead to national chaos and disorder."

It is most gratifying to the members of the medical profession carrying on for their government on all fronts, as well as caring for the afflicted in civilian fields, to get the opinion of men in the public eye on subjects of general interest to physicians *and to the public as a whole, especially along health lines.* Various societies *and other organized groups* having these interests in mind, have procured similiar statements from many men in legislative, executive and other prominent positions, who do not believe it will improve health conditions in general to have governmental control of the practice of medicine, and place it completely under direct supervision of one man, as would be provided in the Wagner-Murray-Dingell Bill.

## PHOTOGRAPHS OF MEMBERS

Members of the Illinois State Medical Society will most likely receive a visit from Mr. Joseph Merante who has taken photographs of the Council, Officers and of several Committees, and who proposes to take photographs of the members for the archives of the Society. These photographs will be added to the fine collection held in the name of this Society at the Illinois State Historical Society, Springfield, the collection having been accumulated by Dr. Carl E. Black over a period of many years.

There will be no charge to the physician for the photograph taken for the Society's files. There will be no obligation to purchase additional photographs from Mr. Merante, this being entirely optional on the part of the individual physician. Mr. Merante has previously taken photographs of the members of the State Medical Societies of New Jersey and New York and has come to Illinois highly recommended in this line of work.

## CRITICAL NEED OF WASTE PAPER

Although many drives have been conducted throughout the country for waste paper, there is a critical need for a larger quantity of this important product. There is a definite shortage of paper brought about by the many additional needs resulting from two years of war.

Among the many uses for paper are containers for food, blood plasma, medicines and supplies, and hospital equipment. Among the newer and war time needs for paper are shell cases, ammunition chests, practice bombs, camouflage material and water proof supply cases for the armed forces. These new uses require hundreds of thousands of tons of paper, which in addition to the normal uses are seriously impairing the present day stocks.

It is stated that it requires no less than 25 tons of blue print paper to build one big battleship. More than 700,000 different kinds of items are shipped to the Army, paper wrapped or in boxes. Each 500 pound bomb requires 12 pounds of paper in the form of rings (bands) tops and bottoms. Each 75 mm shell takes 1.8 pounds of paperboard for its protective container. The chief substitute for the scarce wood pulp today is waste paper.

Physicians, dentists and hospitals depend in large measure on paper for the protection of the many articles for their professional use, and most of this material can easily be salvaged. Books, magazines, newspapers, wrappings, cartons etc., which invariably go into the waste cans should and can be salvaged.

In every community efforts are being made to collect waste paper and physicians should see to it that their material is made available regularly. This valuable waste should not be burned, for paper has gone to war and is not considered by many who are familiar with present needs, as our NUMBER ONE CRITICALLY NEEDED RAW MATERIAL.

## COLLABORATION

Collaboration can be of two kinds, it seems. There are Brothers Hitler and Hirohito, with the new brand — "collaboration" of the enslaved at the point of the sword. Since Americans just don't like that type of collaboration, we are in a war about it.

Rather to be preferred is the teamplay which is making possible the development of the newest of man's brain-children, the electron microscope. There was first an Englishman, with basic discoveries regarding electrons; then an Austrian, a Frenchman, two Germans, a Belgian, two Canadians and several Americans have spliced together the contributions of numerous workers. So that today the electron microscope is a reality, and is in use in research laboratories in several nations. Not limited by the wave length of light, this new tool can magnify 50 to 100 times greater than the finest of previous microscopes. And there is one under construction in New York today that will magnify 1 million times.

Already the virus of tobacco mosaic has been identified by the electron microscope; other viruses are under scrutiny as well as the minute morphology of bacteria and the molecular composition of various compounds. Seen on a fluorescent screen certain bacteria are now known to possess very tough body walls, others have flagella-like appendages. Certain organisms under attack by various chemical compounds have been studied, and the hitherto unknown is beginning to unfold like the pages of a child's primer. Erythrocytes appear to be 2 feet in diameter under the screen of this instrument. Is it too much to expect that many, many of the secrets of life and death, sickness and health will be revealed soon? Numerous serious workers believe that science has opened the door to an entirely new and inspiring vista.

The right sort of collaboration has brought us this great new gift. May Hitler's sort soon perish from this earth—there just isn't room for two kinds.—*Southwestern Medicine.*

*The Preliminary Program for your Annual Meeting is in this issue. Read it Now and Plan to Attend. Make Hotel Reservations Very Quickly!*

# Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

## MEDICAL ASPECTS OF THE GOVERNOR'S COMMITTEE ON REHABILITATION AND EMPLOYMENT

HERMON H. COLE, M. D.
Coordinator of the Department of Public Health
SPRINGFIELD

In the January issue of the Illinois Medical Journal, page 47, appeared an article on veterans' rehabilitation by the Governor's Committee entitled "State Program for Rehabilitating War Veterans." This article covers the general idea of the rehabilitation program and is intended as a supplementary source of information concerning the medical aspects of the work.

The service is the first of its type offered to returned war veterans in the several states, and speaking from the medical standpoint there are certain principles laid down by the Illinois State Medical Society and the American Medical Association which had to be seriously considered in the organization of the medical part of the program.

Dr. Roland R. Cross, under whose direction the medical program was organized, felt that two main principles should be adhered to in order that the medical professions should properly become a part of this program —

(1) The decentralization of medical service to the point where it can be taken care of in the patient's home town.

(2) The patient has the right of free choice of a physician to do the work in a hospital mutually agreeable to the doctor and patient.

In order to carry out these two principles, not only must a certain amount of publicity be given about the program to the county societies, but to the individual physicians throughout the State as well.

At a meeting in Springfield and subsequently in Chicago, Dr. Cross and his representatives took up the question of a free schedule with the Illinois State Medical Society Council, and a general scale of fees representing an average throughout the state was tentatively agreed upon, with the right of revision as conditions warrant. This fee schedule is essentially the same as that in force in the out-patient service of the Veterans' Facility. A copy of this fee schedule will be placed in the hands of each county medical society and the various Chicago branches where it may be looked over or referred to by anyone interested.

So far as the hospitilization plan is concerned, there is a great deal of variation in hospital costs throughout the State, but an attempt is being made to set up a standardized hospitalization scale with laboratory and other necessary adjuncts to medicine and surgery added to it. From the medical standpoint, this method of treating veterans is the most satisfactory one which can be devised at this time. It protects the physician in his right to treat his own patient and to say whether, when, how and where these medical or surgical examinations or treatment should be carried out.

The central office at Springfield does no examinations of veterans, but carefully reviews and authorizes the work to be done by the individual physician and provides the specific fee to be paid. In each instance, these patients for rehabilitation are investigated thoroughly by field

agents and only those unable to pay for their own medical attention as private patients will be considered under this program.

The main idea of the whole organization is to put these men back physically and mentally into the armed forces or the man-power pool where they can be self-supporting.

There are without question certain cities and countries where the proper specialists for special work (namely, eye, ear, nose and throat, special neurological service, special chest service and many others) does not exist at this time. This will be especially true for the duration of the war, as a great many specialists are in service and this situation in some instances will exist for a long time after the war or permanently. The question naturally arises where to send such men for medical attention. Under these circumstances, the central office expects a committee appointed by the local county society to act in an advisory capacity, and the wishes of the local physician chosen by the patient are to be taken into serious consideration. For obvious reasons, the nearest qualified physician to the patient's home should be chosen, but the burden of that choice so far as possible should fall on the shoulders of the medical profession in the neighborhood.

In the furtherance of the veterans care, wherever special services such as examination or treatment are already provided by the State or County, they will be utilized. This is particularly true, for instance, in cases of active tuberculosis which may need long continued sanatorium care. Under the Glackin law, many counties in the State of Illinois either operate and own sanatoriums for the care of tuberculosis, or provide sanatorium care in contact hospitals, and these facilities will be used rather than sanatorium care be undertaken by us in contract hospitals. Unduly complicated medical or surgical cases may at times be sent to such institutions as the Illinois Research Hospital in Chicago for intensive study when conditions warrant. The point is that in order to rehabilitate these veterans and to re-train them to work they can do, we must have a medical picture which is relatively complete, and such defects as are found should be remedied so far as possible before rehabilitation takes place. There is no medical facility in the State which may not at some time be utilized for this purpose. The veteran will have to be qualified medically for the job for which he is trained, and when and if his medical situation changes it may be necessary at times to change his occupation in order to coincide with the medical situation. This will entail continued medical observation and examination by qualified men.

It may be remembered that after the last war when there were insufficient hospital beds, it was found physically impossible to take care of all the service-connected disabilities in government owned and operated hospitals. This program was decentralized to some extent. The present setup does not in any way interfere or take part in the medical care or rehabilitation of service-connected disabilities. These are a distinct Federal responsibility and our only part in such a program will be merely to fill in the gap between the time that the patient is discharged and the service connection established, so that no time will be lost in his rehabilitation. When and if service connection is established, and this organization will help in such establishment if it seems warranted, the patient's control will be turned over to the Federal facility who may continue the rehabilitation work already started here. According to statements that have been given out by responsible men, there are not at this time sufficient Federal facilities in existence to take care of the expected load from the present war, and it is probable that only emergency work and definite service-connected disabilities can be handled physically, at this time at least, by the Veterans' Facility. This may not be a permanent condition, but there is a possibility or even a probability of such a condition in the near future, as our war load of wounded and sick are returned to this country for further care. This will necessitate some decentralization of the non-service connected disabilities now handled or handled in the past in veterans' hospitals. Whether this organization can assume a part of this load has not as yet been definitely decided, but it is possible, and if it is decided that these non-service connected disabilities from the first World War can be handled better through the Governor's Committee, it will mean that the local physicians throughout the State will have to be called upon to take a part in this program. The Veterans' Facility now handles such situations through certain designated examiners throughout the State, so that pro-

gram of this type is already in operation but the load is not heavy at this time. Speaking from a purely financial standpoint, not only the present program as organized by the Governor's Committee, but the possible future plan to take care of the increased load, will mean a considerable financial advantage to the physicians of the State of Illinois. The fees are adequate and fair, the number of cases while relatively small at present will undoubtedly be considerable, and the compensation is certain. The advantage to the local physician is in the retention of his patient, the certainty of financial return for his services, and the satisfaction of knowing that he is a part of the general plan to put these veterans back into industry and usefulness for which they have given so much. Even without any financial return whatever, it is a patriotic duty and privilege most men will welcome.

The assurance that the interests of the medical profession will be safeguarded through the Governor's Committee on Veterans' Rehabilitation and Employment and Dr. Cross, Director of the State Department of Public Health, is definite. Organized plans, although not yet complete, are aimed toward the protection of the principles laid down by the State and national medical organizations. An attempt has been made by our Committee to educate the physicians throughout the State with the necessary details of what they can do to assist us, and no moves are contemplated without the full cooperation, knowledge and sanction of the representatives of the county societies through their State organization.

The plan is being organized on a long-time basis, and if it proves satisfactory and of service to Veterans as we confidently expect it will, it will carry through and probably be operating considerably beyond the lifetime of all who read this article. It is of particular interest that such a plan is, to the best of our knowledge and belief, the first time that the doctor in his own field has been given complete responsibility for the care of his patients under a State program. We feel sure that the medical profession will respond to the implied compliment.

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★ **BUY WAR BONDS** ★

## HEALTH HAZARDS FOR WORKERS MAKING SYNTHETIC RUBBER

The manufacture of synthetic rubber involves several chemical compounds which are toxic (poisonous) to man, Captain Rex H. Wilson, Medical Corps, Army of the United States, points out in *The Journal of the American Medical Association* for March 11.

"In my opinion," he says, "the following general precautions should be observed in all plants manufacturing synthetic rubber:

"1. A complete preemployment physical examination for all workmen, including a complete blood count, urinalysis, blood icterus index, blood Kahn or Wassermann test and a chest x-ray examination. Evidence of chest, liver or kidney disease, syphilis or pregnancy should preclude employment.

"2. All operating personnel should be examined every three months, this examination to include a complete blood count, urinalysis, blood icterus index and a chest x-ray examination. Evidence of organic pathologic [disease producing] change should be reason for immediate removal from the job.

"3. All operating personnel should be impressed with the toxic hazards of the various compounds and taught to handle them properly.

"4. A closed type of operation should be made mandatory. Continuous inspection of all equipment for possible leaks should be enforced.

"5. A set of safety rules regarding the use of protective equipment (gloves, goggles, masks) should be posted at the danger spots.

"6. Both personal and group safety equipment should be supplied as needed.

"7. Adequate ventilation, both local and general, should be maintained at all times."

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Improved health conditions are in evidence on a broad front. Yet on all sides we encounter much disability and many deaths due to diseases for which we have adequate means of prevention and control.

Tuberculosis stands out prominently as one of the chief offenders in this group. Sixty thousand annual deaths represent but a small part of the penalty paid by the American people for failure to eradicate this disease. It is estimated that half a million persons in the United States have tuberculosis . . . . . yet the vast majority of this group will not be given the advantages of early diagnosis and early treatment. This presents a public health problem of major significance. H. D. Lees, M.D. Social and Economic Aspects of Tuberculosis. 1943.

# Medicine's Role in the War Effort

## LATIN AMERICAN MEDICAL GRADUATES SERVING AS INTERNS AND RESIDENTS IN U. S. HOSPITALS NOT COUNTED IN QUOTA

At a recent meeting of the Directing Board, Procurement and Assignment Service, it was decided that graduates of Latin American medical schools currently serving as interns or residents would not be counted in hospital quotas.

It was felt that most Latin American doctors who accepted internships or residencies were in fact postgraduate fellows attached to U. S. hospitals. In some instances language difficulties precluded their rendering as much medical care to hospital patients as native born and U. S. trained house officers. If Latin American physicians were to be counted in hospital quotas, there would be some hesitancy in accepting them in lieu of native born United States medical graduates.

Since it is highly desirable to have Latin American physicians seek postgraduate medical training in the United States, dropping them from hospital quotas would encourage hospital superintendents to accept them as interns and residents and thus facilitate their securing additional training in this country.

★ ★

## TRAINING OF NEWLY COMMISSIONED MEDICAL CORPS OFFICERS WHO ARE RECENTLY GRADUATED INTERNS

Many newly commissioned medical corps officers who have recently completed a nine months internship and the basic course for medical department officers are being attached to named general hospitals for the completion of their professional training, according to Army Service Forces Circular No. 47, dated Feb. 12, 1944. While attached to these general hospitals they will be given "on the job" training as understudies in active medical and surgical wards and in clinics. Duty assignment on surgical and medical services will be rotated at least once every three weeks. It is contemplated that immediately following this training in a named general hospital these officers will be assigned as medical and surgical ward officers, as laboratory officers and as medical officers with tactical units.

Subjects which should be particularly emphasized on ward rounds and in clinics include attention to and care of the seriously ill; use of penicillin in both surgical and medical cases; use of sulfonamides in both surgical and medical cases; treatment of venereal disease; general principles of wound treatment, including debridement, control of pain, prevention and treatment of shock; treatment of fractures and other orthopedic conditions, including splints and splinting, use of plaster of paris bandages, Tobruk splints and the care and handling of back injuries; general principles in the handling of head, face and jaw wounds and wounds of the chest and genitourinary system; treatment of burns; problems and principles of transfusions under field conditions, including whole blood transfusions, direct and indirect transfusion technic and the use of blood substitutes to include plasma, albumin and electrolytes; administration of tetanus toxoid and gas gangrene serum; administration of vaccines; diagnosis and treatment of malaria; diagnosis and treatment of bacillary and amebic dysentery; diagnosis and treatment of dengue and typhus; prevention and treatment of heat stroke, heat exhaustion and heat cramps; prevention and treatment of freezing, frostbite, snow blindness and immersion foot, and the handling of neuropsychiatric cases.

The commanding officer of each general hospital will designate a training officer who will be responsible for the conduct, rotation and coordination of this training, ward rounds and clinics so that these officers can derive the maximum benefits from this limited period of "on the job" training.

## PHYSICAL EFFICIENCY RATINGS FOR TRAINEES

Army Service Forces Circular No. 25 states that training in medicine under the Army Specialized Training Program will terminate on the issuance of a certificate of successful completion of the prescribed course of medical instruction. Graduates who are discharged from their enlisted status in order to accept appointment in the Medical Corps Reserve or Medical Corps, A. U. S., will not be called to active military duty until they have completed the nine months internship, as now prescribed, if the military situation permits. Such internships will be served in an inactive status, that is, as civilians, and will be contracted for individually by the prospective graduates during their senior years.

The War Department desires that the internship be served in hospitals approved for intern training by the Council on Medical Education and Hospitals of the American Medical Association, and that, in view of the need for interns in hospitals within the United States, contracts be not accepted for internships in Canadian hospitals. There is no objection to accepting and serving the prescribed hospital internship in the territories of the United States or the Canal Zone, in hospitals which will coordinate their intern-resident training programs with the accelerated medical program and with the inter-resident program of Procurement and Assignment Service for Physicians, Dentists and Veterinarians, War Manpower Commission.

In general, unless the exigencies of the military situation require earlier call to active duty, appointed medical officers will be ordered to active duty by the War Department not later than ten months after appointment, except that not to exceed one third of the total number of such interns available for call to active duty in any calendar month, if certified to the War Department by the War Manpower Commission (Procurement and Assignment Service for Physicians, Dentists and Veterinarians) as essential junior hospital residents within a ceiling quota for such residents allocated by that agency to each state and hospital, will be continued in an inactive status by the War Department for an additional period of nine months. One half of the number deferred from call to active duty as junior residents who are subsequently available for call to active duty in any calendar month will, if similarly certified, be continued on an inactive status for an additional period of nine months as senior residents.

Present plans contemplate that, on being ordered to active duty within ten months after appointment, or on completion of junior or senior residency, if authorized, officers will be sent to the Medical Field Service School for a period of approximately six weeks. It is further contemplated that those ordered to active duty within ten months after appointment will be assigned for a period of six weeks to an army general hospital prior to definite duty assignment.

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## INTERNS AND RESIDENTS HOLDING MEDICAL ADMINISTRATIVE CORPS COMMISSIONS URGED TO ACCEPT MEDICAL CORPS COMMISSIONS

There are still a few interns and residents who hold commissions in the Medical Administrative Corps who have failed to convert their commissions to the Medical Corps. Detailed instructions have been mailed to the remaining interns and residents, giving the procedure to be followed. In certain instances the conversion requests have been ignored, under the impression that a Medical Administrative Corps commission would assure a delay in a call to active duty. It has been pointed out that a failure to comply with the conversion requests within a reasonable period may result in an immediate call to duty as a Medical Administrative Corps officer. Every effort should be made by all concerned to comply with the requests of the Surgeon General and effect immediate conversion.

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## VITAMIN A PLACED UNDER ALLOCATION

The War Production Board recently announced that vitamin A, which is sometimes used in overcoming night blindness, was placed under allocation for the first time. The action was taken to insure equitable distribution of the vitamin in the face of mounting demand. This increase in demand will exceed the volume of new supplies and make it necessary to draw on reserve. It was stated that this move would have no great effect on the public in the near future. Vitamin A occurs naturally in fish liver oils. Four synthetic vitamins already are under allocation. These are vitamin C, vitamin $B_1$, vitamin $B_2$ and nicotinic acid. Cod liver oil and tuna liver oil are not affected by the new order, No. M-373. Vitamin A in standard dosage forms or in food and feed compounds is also exempted.

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## METHYL BROMIDE PLACED UNDER ALLOCATION

The War Production Board recently announced that methyl bromide, commonly used as an insecticide, has been placed under allocation, effective March 1, by amending Miscellaneous Chemicals Order M-340 to include it. The maximum monthly small order exemption is fixed at 10 pounds. No other deliveries may be made without specific authorization.

## CAPT. SHELDON C. SOMMERS AWARDED SILVER STAR

Capt. Sheldon C. Sommers, formerly of Indianapolis, has been awarded the Silver Star for heroism in action in Italy. The citation accompanying the award read "Under heavy enemy shell fire, Captain Sommers left his position of safety to care for several men who were wounded by an enemy burst. During this period Captain Sommers was under heavy artillery fire. After the wounded were treated and evacuated, he found that several unseasoned troops were becoming panic stricken. He calmed them and got them to return to their positions. Captain Sommers' action reflects great credit on the medical service." Dr. Sommers graduated from Harvard Medical School in 1941, interned at the University of Chicago Clinics and entered the service July 30, 1942.

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## LIEUT. FRANK K. DEAN AWARDED BRONZE STAR

Lieut. Frank K. Dean, formerly of Madison, Wis., was awarded a bronze star for participating in the battle of Tarawa in November 1943; two months after reporting for duty as a member of the Navy Medical Corps. He previously had received an Asiatic Pacific campaign ribbon. Dr. Dean wrote to his wife, in Madison, that the ship on which he saw duty had carried no medical officer and he found no preparations or supplies when he went aboard. Just as the pioneer doctors, he was forced to improvise. From the ship's cook he commandeered tablespoons for retractors, forks for slings, and a pressure cooker for a sterilizer. Splints were whittled ashore, and a local station gave him sutures and plasma. Dr. Dean graduated from Northwestern University School of Medicine, Chicago, in 1935.

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## LOWER NAVY REQUIREMENTS SET BY MEDICAL BOARD

The special five man medical commission (The Journal, January 15, p. 166) which President Roosevelt appointed to study physical, mental and moral standards for admission to the armed forces has submitted to the White House a report which recommends that navy eye and teeth requirements be lowered to correspond to those in army general service requirments. The move is expected to have little immediate effect on the nation's three million 4-F's but will improve the general selective service picture by allowing more men to enter the Navy and enabling Selective Service to place more men where they are needed most. It was learned that Selective Service officials have seen the report and that, as a result of its recommendations, the reexamining of a number of 4-F's will be required.

## COORDINATION OF PHYSICAL AND SURGICAL THERAPY IN ORTHOPEDIC AND AMPUTATION CASES

The War Department states in the Technical Bulletin of Medicine No. 10, dated February 14, that in order that the care of orthopedic and amputation cases may be of the highest order, treatment by responsible medical officers and physical therapists must be more closely coordinated. Such coordination can be effected by the attendance of physical therapists at ward rounds and at clinical orthopedic conferences at which the diagnosis, clinical history and proposed therapy in each case are discussed by the ward officers and section chiefs.

An active program of muscle development and rehabilitation during convalescence is essential. More careful attention during the early postoperative period should be given to special exercises of the muscles of the abdominal wall, extremities and back. By their use all patients requiring prolonged periods in bed, including those in casts, can prevent the development of muscle weakness and atrophy.

The importance of quadriceps muscle treatment is too frequently disregarded. This has been responsible for poor postoperative results, especially in cases of internal derangement of the knee joint. Preoperative instruction of the patient in regard to exercises to be carried out following surgery should be given. The prescribed exercises should be begun as early as forty-eight hours after surgical operation and should be graduated to include, successively, static contraction, straight leg raising, active motion and resistive exercises. Full weight bearing must not be permitted until the strength of the quadriceps is adequate. Grouping of patients with allied conditions will facilitate instruction and promote interest and a spirit of competition in the proper performance of the prescribed exercises.

Massage should be employed only in those cases in which it is definitely indicated and should never be carelessly or hurriedly administered. Such therapy is a valuable supplement to active exercises but not a substitute for them.

In the case of peripheral nerve injuries particular attention should be given to muscle testing and tests for sensory changes. The progress of these cases can be followed only when this information is well known to both the medical officer and the physical therapist.

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## NAVY PERSONNEL

The Navy Department recently announced the promotion of Rear Admiral Ross T. McIntire, Surgeon General of the Navy, to the rank of Vice Admiral.

# PRELIMINARY PROGRAM

## OF THE

## *One Hundred Fourth Annual Meeting*

## *Illinois State Medical Society*

CHICAGO, ILLINOIS

PALMER HOUSE

MAY 16, 17, 18, 1944

# General Sessions

**TUESDAY AFTERNOON, MAY 16, 1944**
**GRAND BALLROOM**

**OPENING MEETING**

1:00 Meeting Officially Opened by the President.
Invocation.
Address of Welcome.
Report of Chairman, Committee on Arrangements—Harry M. Hedge, Chicago.
Adjournment for Scientific Meetings.

**TUESDAY EVENING, MAY 16, 1944**
**RED LACQUER ROOM**

9:00 Oration in Medicine—"The Evolution of Our Knowledge of Coronary Heart Disease."
Paul Dudley White, Massachusetts General Hospital, Boston, Massachusetts.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

11:00 Oration in Surgery—"Progress in the Army Medical Services." (Illustrated by Slides).
Brigadier General Fred W. Rankin, Office of the Surgeon General, Washington, D. C.

**THURSDAY MORNING, MAY 18, 1944**
**RED LACQUER ROOM**

Induction of the President-Elect

Immediately following the completion of the second session of the House of Delegates, the President-Elect, Everett P. Coleman, Canton, will be inducted into the office of President of the Illinois State Medical Society. All members and guests at the meeting are invited to attend this function.

# Joint Sessions

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session of Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

Chemotherapy

9:00 "Surgical Indications"
Karl A. Meyer, Chicago.

"Medical Indications"
A. E. Brown, Mayo Clinic, Rochester, Minnesota.

"Present Day Status of Veneral Disease Control and Treatment"
A. J. Aselmeyer, Chicago. (U.S.P.H.S.)

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**PRIVATE DINING ROOM No. 14**

Joint Session of Sections on Public Health and Hygiene, Obstetrics and Gynecology and Pediatrics.

2:30 "Problems in the Care of the New Born."
Eugene T. McEnery, Chicago.

"A Review of Old and Modern Treatment of Asphyxia Neonatorum"
Isaac A. Abt, Chicago.

"Tuberculosis—A New Post-war Public Health Problem"
E. A. Piszczek, Chicago.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session of Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology, and Pathology.

9:00 "Pathologic Basis for Clinical Manifestations in Nephritis"
J. P. Simonds, Chicago.

"Continuous Caudal Anesthesia"
Robert A. Hingson and Waldo B. Edwards, Philadelphia, Pa.

Third presentation:
Subject and speaker to be announced later.

# Section Programs

(All material presented here is tentative and subject to additions, deletions and changes. The final program will appear in the May Illinois Medical Journal.)

## SECTION ON MEDICINE

G. B. Stericker ..... Chairman
Laurence E. Hines ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**GRAND BALLROOM**

2:00-5:00
"Histoplasmosis"
William A. Thomas, Chicago.

"Tuberculosis in War Time"
Maxim Pollak, Peoria.

"Management of Infectious Diseases of Colon"
M. H. Streicher, Chicago.

"Medical Management of Biliary Tract Diseases"
Ralph E. Dolkart, Chicago.

"Sulfamerazine"
Italo Volini, Gertrude M. Engbring and Hildegarde Schorsch, Chicago.
Discussion: Wayne W. Fox, Evanston.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**GRAND BALLROOM**

2:00 to 5:00
Chairman's Address: "Gold Therapy in Rheumatoid Arthritis"
G. B. Stericker, Springfield.
"Malaria"
Major P. L. Shallenberger, M.C., Gardiner General Hospital.
Discussion: Robert K. Maddock, Chicago.

"The Effects of Drugs on the Electrocardiogram"
T. R. Van Dellen and J. Roscoe Miller, Chicago.

"Neurological Symptoms of Infectious Mononucleosis"
Thomas J. Coogan, Chicago.
Discussion: Ronald P. Mackay, Chicago.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

## SECTION ON SURGERY

J. S. Lundholm ..... Chairman
G. E. Johnson ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**RED LACQUER ROOM**

Joint meeting with Central States Society of Industrial Medicine and Surgery.

Industrial Surgery — title to be announced later.
H. P. McCuistion, Alton.
Advantages and Limitations of The Skeletal Fixation Method for Fractures.
Manley A. Page, Chicago.
Internal Fixation of Hip Fractures.
R. J. Hyslop, Freeport.

Note: — This program is incomplete and will be published in full in the May Illinois Medical Journal.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session of Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology, and Pathology.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**GRAND BALLROOM**

Chest Injuries.
Willard Van Hazel, Chicago.
Venous Thrombosis and Pulmonary Embolism.
G. deTakats, Chicago.
Vesticio-Vaginal Fistula.
Chester W. Trowbridge, Oak Park.
Epithelioma of the Lower Lip.
D. B. Freeman, Moline.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session of Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

## SECTION ON EYE, EAR, NOSE AND THROAT

George H. Woodruff ..... Chairman
*Sanford N. Gifford ..... Secretary
Beulah Cushman ..... Acting Secretary

*Deceased

**TUESDAY MORNING, MAY 16, 1944**
**CRYSTAL ROOM**

9:00 "Ocular Allergy"
Louis Bothman, Chicago.
9:30 "Lid Edema"
Martha Rubin Folk, Chicago.
10:00 "Discomfort Cases"
Ralph H. Woods, LaSalle.
10:30 "Sphenoid Sinus Drainage"
O. E. Van Alyea, Chicago.
11:00 "Sinusitis in Children"
Glenn Greenwood, Chicago.

**TUESDAY AFTERNOON, MAY 16, 1944**
**CRYSTAL ROOM**

2:00 "Laryngeal Emergencies Including Bulbar Poliomyelitis"
Thomas Galloway, Evanston.
3:30 "Nasal Medication"
Noah D. Fabricant, Chicago.

**ROOM NO. 788**

2:00 "Examination of Strabismus Patients with Indications for Treatment"
George Guibor and Arthur Strich, Chicago.
3:30 "Plastic Procedures About the Eyes"
Irving Puntenney, Chicago.

**TUESDAY EVENING, MAY 16, 1944**
**CRYSTAL ROOM**

6:00 Section Banquet
"Reminiscences" — H. W. Woodruff, Joliet.

**WEDNESDAY MORNING, MAY 17, 1944**
**CRYSTAL ROOM**

9:00 "Ocular Proptosis"
Edgar A. Thacker, Urbana.
9:30 "Ocular Brucellosis"
Arlington C. Krause, Chicago.
10:00 "Carcinoma of the Larynx" — Present Concepts of Diagnosis and Treatment.
Paul H. Holinger, Chicago.
10:30 "Individualization in the Management of Carcinoma of the Maxillary Sinus"
Maurice F. Snitman, Chicago.
11:00 "Management of Chronic Purulent Otitis with Fistula Symptom"
M. Tamari, Chicago.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**CRYSTAL ROOM**

2:00 "Experimental Fenestration on the Labyrinth and its Bearing on the Fenestration Operation"
George Shambaugh, Chicago.

**ROOM NO. 788**

2:00 "The More Common Lacrimal Problems"
Harold Gifford, Omaha, Nebraska.

## SECTION ON PUBLIC HEALTH AND HYGIENE

Roland R. Cross ..... Chairman
E. A. Piszczek ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**PRIVATE DINING ROOM 18**

**Theme: POST-WAR PUBLIC HEALTH SERVICE**
1:30 to 5:00

"Development of County Health Departments"
Richard F. Boyd, Director, Local Health Administration, Illinois Department of Public Health.

"Mental Ills as a Post-War Public Health Problem"
Conrad Sommer, Illinois Department of Public Welfare.

"Tropical Diseases as a Post-War Problem in Illinois"
A. S. Rumreich, Senior Surgeon, United States Public Health Service, Liaison Officer, Sixth Service Command.

"Maternal and Child Hygiene"
Hugo V. Hullerman, Chief, Division of Maternal and Child Hygiene, Illinois Department of Public Health.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**PRIVATE DINING ROOM NO. 14**

Joint Session with Sections on Pediatrics and Obstetrics & Gynecology.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

## SECTION ON RADIOLOGY

Fay H. Squire ..... Chairman
P. R. Dirkse ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 9**

2:00 to 5:00
"Silicosis of the Lungs with Differential Diagnosis"
Harold E. Davis, Chicago

"Recent Trends in the Treatment of Cancer."
Roswell T. Pettit, Ottawa.

"Radiation Therapy of Chronic Leukemia."
T. G. Clement, Peoria.

"Value of Spot Films in the Radiography of The Stomach."
Frank L. Hussey, Chicago.

**TUESDAY EVENING, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 6**

Annual Dinner — 6:00 p.m.
Program to be announced.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Pediatrics, Obstetrics and Gynecology and Pathology.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Pediatrics, Obstetrics and Gynecology and Pathology.

## SECTION ON PEDIATRICS

Robert Cummings ..... Chairman
John F. Carey ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 17**

2:00 to 5:00
**SYMPOSIUM ON RHEUMATISM**

"Rheumatic Fever as a Public Health Problem"
Orville E. Barbour, Peoria.

"Rheumatic Fever in Childhood"
H. W. Elghammer, Chicago.

"Rheumatic Heart Disease"
S. W. Gibson, Chicago.

"Treatment of Rheumatic Syndrome"
Philip Rosenblum, Chicago.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Obstetrics and Gynecology and Pathology.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**PRIVATE DINING ROOM NO. 14**

Joint Session with Sections on Public Health and Hygiene and Obstetrics and Gynecology.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Obstetrics and Gynecology and Pathology.

## SECTION ON OBSTETRICS AND GYNECOLOGY

C. J. Heiberger ..... Chairman
J. P. Greenhill ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 14**

2:00 to 5:00

"Carcinoma of the Body of the Uterus"
Herbert E. Schmitz, Chicago.

"Radiation Changes in Carcinoma in the Body of the Uterus"
John F. Sheehan, Chicago.

"The Challenge of the Eclamptogenic Toxemia"
Frederick H. Falls, Chicago.

"A Statistical Study of the Obstetric Activities in Illinois Hospitals During 1943"
Charles H. Newberger, Chicago.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Pediatrics and Pathology.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**PRIVATE DINING ROOM NO. 14**

Joint Session with Sections on Public Health and Hygiene, and Pediatrics.

## SECTION ON PATHOLOGY

J. J. Moore ..... Chairman
E. F. Hirsch ..... Secretary

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Pediatrics and Pathology.

**TUESDAY AFTERNOON, MAY 16, 1944**

2:00 to 5:00

"Clinical Evaluation of Serological Tests for Syphilis in 8000 Cases"
Past Asst. Surgeon J. M. Lubitz, U. S. P. H. S., Marine Hospital, Chicago, Ill.

"The Pathology Department in the Tumor Clinic of the Veterans Administration"
Lt. Col. W. L. McNamara, Hines Hospital, Hines, Ill.

"Some Pathological Specimens from a Group of Supposedly Robust Men"
Commander J. J. Kearns, USNR, Great Lakes, Illinois.

"Laboratory Investigations in Relation to Penicillin Therapy"
Capt. Louis A. Schneider, USA, Chicago, Ill., Gardiner Hospital.

"Clinical Observations in the Use of Penicillin"
Lieut. Col. Earl R. Denn, USA, Chicago, Ill., Gardiner Hospital.

## CLINICO-PATHOLOGICAL CONFERENCE

**SAMUEL LEVINSON**
**MAY 17, 1944 1:30 - 2:30 P.M.**

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint session with Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics, and Obstetrics and Gynecology.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint session with Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics, and Obstetrics and Gynecology.

# *Meetings of Special Groups*

## MEETING OF THE HOUSE OF DELEGATES

**TUESDAY AFTERNOON, MAY 16, 1944**
**FOYER OF THE GRAND BALLROOM**

3:00 The first meeting of the House of Delegates called to order by the President, Robert S. Berghoff, for Reports of Officers, Councilors, Committees, Appointment of Reference Committees, Introduction of Resolutions, and for the transaction of other business which may come before the House.

**THURSDAY MORNING, MAY 18, 1944**
**RED LACQUER ROOM**

9:00 The second meeting of the House of Delegates called to order by the President for the Election of Officers, Councilors, Committees, Delegates and Alternates to the American Medical Association, Reports of Reference Committees and action on same, action on Resolutions, and for the transaction of other business to come before the House.

## SECRETARIES' CONFERENCE

P. J. McDermott, Chairman ..... Kewanee
E. F. Moore, Vice-Chairman ..... Collinsville
George A. Barnett, Secretary ..... Riverside

**TUESDAY EVENING, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 14**

The Secretaries' Conference Dinner will be held Tuesday evening at 6:00 o'clock in Private Dining Room 14, at the Palmer House.

The program will be announced in the May Illinois Medical Journal by Dr. George A. Barnett, Secretary.

## VETERANS' SERVICE DINNER CONFERENCE

**TUESDAY EVENING, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 17**

The annual Veterans' Dinner Conference will be held on Tuesday evening, May 16, in private dining room No. 17 at the Palmer House.

Dr. Pliny R. Blodgett, Chairman of the Veterans' Service Committee will preside at the meeting, and a program of interest to physicians in war time America will be presented.

## ILLINOIS CHAPTER AMERICAN COLLEGE OF CHEST PHYSICIANS

**TUESDAY NOON, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 7**

Minas Joannides, President ..... Chicago
Fred M. F. Meixner, Vice-President ..... Peoria
Julius B. Novak, Secretary-Treasurer ..... Chicago
E. R. Levine, Chairman, Program Committee .... Chicago
Willard Van Hazel, Chairman, Public Relations Committee ..... Chicago
O. C. Schlack, Chairman, Nominating Committee ..... Oak Forest

The annual meeting of the Illinois Chapter, American College of Chest Physicians, will be held at the Palmer House Chicago, May 16, 1944, in connection with the annual meeting of the Illinois State Medical Society.

Colonel Arnold Dwight Tuttle, Medical Director, United Airlines, will be the guest speaker. He will present a paper, "The Effect of Air Travel on Cardio-respiratory Diseases," at the luncheon meeting.

A business meeting with reports of committees and election of officers will follow the luncheon.

## CENTRAL STATE SOCIETY OF INDUSTRIAL MEDICINE & SURGERY

**TUESDAY MORNING, MAY 16, 1944**
**RED LACQUER ROOM**

J. Daniel Williams, Program Chairman
W. M. Hartman, President ..... Macomb
F. M. Miller, President-Elect ..... Chicago
H. W. Wellmerling, Vice-President .... Bloomington
F. P. Hammond, Secretary-Treasurer ..... Chicago

A.M.
9:00 "The Relation of Malignancy to Trauma"
Harry E. Mock, Associate Professor of Surgery, Northwestern University, Senior Surgeon, St. Luke's Hospital, Chicago.
9:40 Discussion.
9:55 "The Back as an Industrial Problem"
Lewis M. Overton, Des Moines, Iowa. Member Board of Governors, Central States Society of Industrial Medicine and Surgery.
10:20 Discussion.
10:30 "The Changing Panorama of Industrial Medical Requirements"
Carl M. Peterson, Secretary, Council on Industrial Health, American Medical Association, Chicago.
11:00 Discussion.
11:15 "The Relation of Mouth Infection to Industrial Health; A Mouth Health Program for Industry"
Earle H. Thomas, M.D., D.D.S., LL.B., Past President, American and Chicago Societies of Oral Surgeons; Former Assistant Professor of Oral Surgery, Chicago College of Dental Surgery, Chicago.
11:45 Discussion.

**TUESDAY AFTERNOON, MAY 16, 1944**
**RED LACQUER ROOM**

**JOINT SESSION WITH SECTION ON SURGERY**

(For Complete Program See Section on Surgery.)

## MEDICAL WOMEN'S ASSOCIATION

**WEDNESDAY MORNING, MAY 17, 1944**
**PRIVATE DINING ROOM NO. 18**

8:00 a.m.

A complimentary breakfast for the women members of the Illinois State Medical Society will be served in Private Dining Room No. 18, on the club floor of the Palmer House at eight o'clock Wednesday morning, May 17, 1944.

Tickets may be obtained at the booth adjoining the registration desk.

## ALUMNI LUNCHEONS

**UNIVERSITY OF ILLINOIS**
**PALMER HOUSE — PRIVATE DINING ROOM NO. 17**

The annual luncheon and election of officers of the Medical Alumni Association of the University of Illinois will be held at the Palmer House on May 17th at 12:00 o'clock, noon. Reservations must be made before May 15th ($2.50 per plate) with M. H. Streicher, Secretary-Treasurer, 1853 West Polk Street, Chicago.

**MEDICAL SCHOOLS OUTSIDE OF CHICAGO — UNIVERSITY CLUB**

On Wednesday, May 17th, in association with the meeting of the Illinois State Medical Society, there will be a luncheon for the graduates of medical schools outside of Chicago. This luncheon will be held at 12:30 p.m. at the University Club. Reservations may be made with Willard O. Thompson, 700 North Michigan Avenue, Chicago 11, Illinois.

**LOYOLA UNIVERSITY — PALMER HOUSE, PRIVATE DINING ROOM NO. 18**

On Wednesday, May 17th, at 12:00 noon, the alumni of the Loyola University School of Medicine will have their annual luncheon meeting. Reservations and information may be secured from G. G. Grant, S.J., Faculty Secretary of the Alumni Association, 5625 Sheridan Road, Chicago 26, Illinois. Plans have been made for Loyola alumni to contact one another at a desk to be placed near the Registration Desk at the meeting this year.

## FIFTY YEAR CLUB LUNCHEON

**WEDNESDAY NOON, MAY 17, 1944**
**PRIVATE DINING ROOM 9**

12:00 noon.

The annual luncheon of the Fifty Year Club will be held Wednesday noon, May 17, 1944, in private dining room No. 9.

Doctor Andy Hall, Chairman of the Fifty Year Club Committee since its organization, has sent out personal invitations to all members inviting them to be present this year. Several short talks have been arranged for presentation at the luncheon, all of which should prove of interest to those in attendance.

## PHYSICIAN'S ASSOCIATION

**DEPARTMENT OF PUBLIC WELFARE**
**STATE OF ILLINOIS**

M. Goldberg ..... President
M. Lorber ..... Vice-President
J. Klapman ..... Secretary-Treasurer
E. Liebert ..... Chairman, Program Committee

**TUESDAY MORNING, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 14**

9:00-12:00—

"The Rorschack Test in Post-Encephalitis"
J. L. Endacott, Manteno.

"Buerger's Disease of the Brain and Hypertensive Encephalopathy"
N. Beim, Elgin.

"Hemorrhagic Encephalopathy Following Five Day Treatment of Early Syphilis with Massive Doses of Mapharsen"
G. Heilbrunn and N. Hoffenberg, Chicago.

"Organic Brain Disease with Ganser Like Syndrome"
A. A. Lieberman, Elgin.

"Therapeutic Techniques with Problem Children"
E. Angres, I.J.R.

"The Action of Shock Therapy in the Light of Clinical Observations"
B. Kovitz, Jacksonville.

"Electric Shock Therapy in Patients with Severe Psychoneurosis"
R. Gronner, Elgin. (To be read by title)

"Intramural Group Psychotherapy"
J. W. Klapman, Chicago. (To be read by title)

## MATERNAL WELFARE LUNCHEON

**WEDNESDAY, MAY 17, 1944**
**CLUB ROOM 15-16 — PALMER HOUSE**

The annual luncheon meeting of the Maternal Welfare Committee will be held at 12:00 o'clock noon on Wednesday, May 17, 1944.

The program will be a round table discussion on the Federal Plan for the Obstetrical Care of Service Men's Wives. The discussion will be opened by John F. Carey of Joliet and Frederick H. Falls of Chicago, and Hugo V. Hullerman of Springfield, who has been in charge of this program since it has been in operation in Illinois.

## GOLF TOURNAMENT

Remember last year? Golf courses flooded — tournament cancelled! Once again this year a golf tournament will be held.

The many prizes purchased for last year have been wrapped and stored carefully, and will again be given to the champions.

The tournament will be held Tuesday morning, May 16th. Watch future publications for location.

Robert E. Cummings, Chairman
Golf Committee.

## *Scientific Exhibits*

Frank J. Jirka, Chairman ..... Chicago
H. Close Hesseltine, Director of Exhibits ... Chicago

**"Induced Typhoid Fever Therapy in Asymptomatic Neurosyphilis"**

Fever Therapy, induced by typhoid fever vaccine in treatment of asymptomatic neurosyphilis.

Alton State Hospital — Alfred Paul Bay and Bernard Strassman.

Posters on:

1. **Medical service in industry** showing by means of graphs, the development of recent trends compared with the previous decade:

2. **Cancer clinics,** their organization and steady growth,

3. **Graduate training** in surgery and surgical specialties with emphasis on post war increase of training plans,

4. **Library and literary research,** showing the activity of the library service during war time.

American College of Surgeons — Bowman C. Crowell, Associate Director.

**"Botulism"**

Exhibit of posters, charts and transparencies showing the cause, epidemiology, symptoms and prevention of botulism. This disease is a war time hazard due to home canned produce.

American Medical Association — Thomas G. Hull, Director, Scientific Exhibits.

**"Fight Cancer With Knowledge"**

Placards depicting the recognized methods of treatment of cancer, animal research in cancer control, and normal cell growth and cancer. Also posters explaining the work of the Woman's Field Army — the Cancer Prevention Clinic for Women and Surgical Dressing Units. All recent pamphlets issued by the American Society for the Control of Cancer will be available.

American Society for the Control of Cancer, Woman's Field Army, Illinois Division — Mrs. Arthur I. Edison, State Commander.

**"The Heart"**

Robert S. Berghoff, Chicago.

**"North Africa and Sicily"**

Exhibit consists of a series of water colors done by Major Bosworth while on active service in North Africa and Sicily, depicting the scenery in which the medical personnel worked.

Major Boardman M. Bosworth, M.C., AUS.

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**"Prosthetic correction of inoperable deformities"**

Exhibit consists of a colored motion picture showing how prostheses are made. It is of special interest in war time, since it deals with mutilations considered beyond surgical help. It also shows the place of prostheses as interim treatment to be worn while plastic surgery is being planned and even as plastic surgical corrections are in progress. The exhibit further displays photographic illustrations of patients with inoperable deformities and their cosmetic improvement while wearing the prostheses. Models will be shown and reprints of scientific articles on the subject will be available.

Adolph M. Brown, The Eye and Ear Infirmary, University of Illinois, Chicago.

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**The Chicago Heart Association, Inc.**

Posters describing material for free distribution. One large poster will include "Modern Concepts of Cardiovascular Disease," published monthly by the American Heart Association, as well as "The Examination of the Heart and The Standardization of Blood Pressure Readings," "The Bulletin" of the Chicago Heart Association, and "Classification of Patients with Diseases of the Heart," "Rheumatic Fever in Children," and the Metropolitan Life Insurance Handbook.

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**Educational Committee, Illinois State Medical Society**

Poster exhibit showing services of the Educational Committee.

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**"Toxemia of Pregnancy"**

Drawings, gross and microscopic, models, graphs, and statistical charts showing the etiology, pathology, symptoms, diagnosis and treatment of eclamptogenic, nephritic toxemia, and hyperemesis gravidarum and acute yellow atrophy. Emphasis is placed on the pathology and treatment of these conditions.

F. H. Falls, Department of Obstetrics and Gynecology, College of Medicine, University of Illinois, and

Charlotte S. Holt, Division of Public Health Instruction, State Department of Public Health, Chicago.

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**"Low Back Pain"**

Rehabilitation of the Disabled Due to Low Back Pain. Exhibit consists of posters describing and illustrating the symptom complex due to functional decompensation. (1) The Symptoms, (2) The findings, and (3) the secondary symptoms and findings. Illustrations to show the mechanical development of the pathological changes. The technic for correction, the rationale of the method of treatment and an illustration of the technic by means of models. Description of apparatus to demonstrate the method of application of plaster of paris jacket. Posters to define the underlying principles of the method, illustrations to demonstrate the technique. Demonstration of rehabilitation of the patient by means of periodic rest and exercises, by means of figures and posters.

Emil D. W. Hauser, Assistant Professor of Bone and Joint Surgery, Northwestern University Medical School; Attending Orthopaedic Surgeon, Passavant Memorial Hospital, Chicago.

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**1—"Wartime Public Health Services of the Illinois Department of Public Health"**

A series of eight 32 x 48 inch chrome-framed panels (on supporting rods) dealing with activities contributing to the war effort such as the following: laboratory services offered to Illinois physicians, venereal disease treatment centers, sanitary engineering activities, control of tuberculosis in industry, industrial hygiene and communicable disease control.

**2—"The County Health Department"**

A three-dimensional display depicting by means of cards flowing out from a cornucopia, the services offered by the medical health officer, the public health nurse and the sanitary engineer, who are represented by cut-out figures. This is accompanied by six posters, two on the rear wall and two on each side wall of the booth, describing the advantages and activities of a county health department.

**3—"Salmonellosis"**

A panel-type display with a 12 foot center section and two six foot wing sections dealing with Salmonellosis. The distribution of known cases, the modes of spread, the three main types of clinical manifestations, the laboratory diagnosis and the prevention of the disease are portrayed. The central panel has a cut-out portion showing a slide illuminated from the rear.

Illinois Department of Public Health, Roland R. Cross, Director, Springfield.

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**"The New Illinois Mental Health Act"**

Graphic presentation of the types of admissions under the new Illinois Mental Health Act, and showing how various objectives were achieved by the passage of this Act. Instructions to physicians in admission procedures of patients to mental hospitals.

Illinois Department of Public Welfare, Mr. Rodney H. Brandon, Director, Springfield.

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**"Cardiovascular-Renal Diseases"**

Exhibit consists of three framed panels painted in attractive colors, each measuring 30 x 45 inches. The exhibit features the extend of mortality from cardiovascular-renal diseases; the influence of certain factors on the mortality; and the past and probable future mortality from these conditions.

Metropolitan Life Insurance Company.

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**"Meniere's Syndrome"**

A series of several charts.

G. Henry Mundt, Chicago.

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**"Pulmonary Tuberculosis and Other Diseases of the Chest. Differential Diagnosis and Treatment"**

Exhibit consists of three illuminated cabinets demonstrating by x-ray and pathologic specimens various conditions found in diseases of the chest. Each cabinet is six feet long and two feet wide. A moving picture may be shown in this booth.

Municipal Tuberculosis Sanitarium, Chicago.

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**"Survey of Opinion on Medical Care"**

A graphic presentation of the public's viewpoint on medical care and prepayment plans, on the program of the National Physicians Committee to develop public acceptance of voluntary pre-

payment plans as a method superior to federal government compulsory plans.
National Physicians Committee for The Extension of Medical Service.

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**"Epidemic Ringworm of the Scalp" Chicago Area Wood Light Demonstration.**
This exhibit will consist of: (a) two descriptive charts, (b) photographs in black and white, (c) cultures, (d) microscopic slides under the microscopes, (e) Wood light demonstration on live subjects, two or three chairs for patients on whom the fluorescence of the wood light will be demonstrated.
Northwestern University Medical School, Department of Dermatology, E. A. Oliver, Chairman.
E. A. Oliver and I. M. Felsher, and Miss Angelakos, Chicago.

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**"Pathology of the Nasopharynx"**
Anatomy and pathology of the pharyngeal structures with special emphasis on the nasopharynx. This study is based on 130 autopsy specimens. Exhibit will consist of photographs illustrating technique of removing pharyngeal structures at autopsy; anatomical drawings and mounted specimens showing pathologic processes in nasopharynx.
Paul B. Szanto, Chicago and Kankakee State Hospitals.
Hans Brunner and A. R. Hollender, Department of Otolaryngology, University of Illinois College of Medicine, Chicago.

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**"Endocrine Regulation of Growth"**
The role of glands of internal secretion in the regulation of growth. Illustrated by a series of greatly enlarged photographs and also by a series of lantern slides which move continuously in balopticon machine. Particular attention is paid to the role of chorionic gonadotropin and the sex hormone in the regulation of growth.
W. O. Thompson, N. J. Heckel, Richard Morris, University of Illinois College of Medicine, Chicago.

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**United States Navy Public Relations**
Movies will be shown in this booth.

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**"Amoebiasis"**
The various methods for the laboratory diagnosis of amoebiasis will be inumerated and discussed. Microscopic preparations and drawings of the E histolytica and other amoebae will be exhibited.
J. M. Lubitz, P. A. Surgeon, United States Public Health Service, U. S. Marine Hospital.

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**"Pioneers in the Study of Asthma"**
Exhibit consists of 54 mounted photographs of men who have done special work in this field.
Leon Unger and I. Isabel Brandt, Northwestern University Medical School, Chicago.

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**"The Peoria Plan for Human Rehabilitation"**
Harold A. Vonachen, Caterpillar Tractor Company, Peoria.

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**"Operative Treatment of Subdural and Extradural Hematoma"**
1,100 feet of 16 mm colored film presenting the chief diagnostic points as well as the pathogenesis and developments of these clots.
Harold C. Voris, Chicago.

**1—"Hygeia, the Health Magazine"**
Exhibit showing health education through Hygeia, The Health Magazine, with sample copies for distribution.

**2—"Benevolence Fund of the Illinois State Medical Society"**
Posters and material explaining this Fund.
Woman's Auxiliary — Illinois State Medical Society.

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**"Plasma Substitutes in the Treament of Shock"**
The use and effectiveness of various plasma substitutes (pectin, gelatin and amino acids) are shown by means of charts and tables. Their indications and contraindications are presented. The sources and methods of administration of these plasma substitutes are shown.
Karl A. Meyer, Donald D. Kozoll, Bruno W. Volk, Frederick Steigmann and Hans Popper. Hektoen Institute for Medical Research of the Cook County Hospital.

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# *Technical Exhibitors*

## 1944 ANNUAL MEETING

Abbott Laboratories, North Chicago, Illinois
A. S. Aloe Company, St. Louis, Missouri
American Hospital Supply Corporation, Chicago, Illinois
The Armour Laboratories, Chicago, Illinois
Ayerst, McKenna and Harrison, Ltd., New York, New York
Bilhuber-Knoll Corporation, Orange, New Jersey
Ernst Bischoff Company, Ivoryton, Connecticut
The Borden Company, New York, New York
The Burdick Corporation, Milton, Wisconsin
Burrough Wellcome & Company, New York, New York
Cambridge Instrument Company, Inc., New York, New York
Camel Cigarettes, New York, New York
Carnation Company, Oconomowoc, Wisconsin
Ciba Pharmaceutical Products, Inc., Summit, New Jersey
The Coca-Cola Company, Atlanta, Georgia
F. A. Davis Company, Philadelphia, Pennsylvania
Doak Company, Inc., Cleveland, Ohio
The Doho Chemical Corporation, New York, New York
Eli Lilly and Company, Indianapolis, Indiana
C. B. Fleet Co., Inc., Lynchburg, Virginia
Flint, Eaton and Company, Decatur, Illinois
Gerber Products Company, Fremont, Michigan
General Electric X-Ray Corporation, Chicago, Illinois
Otis E. Glidden and Company, Evanston, Illinois
The Harrower Laboratory, Inc., Glendale, California
H. J. Heinz Company, Pittsburgh, Pennsylvania
Horlick's Malted Milk Corporation, Racine, Wisconsin
Hynson, Westcott & Dunning, Inc., Baltimore, Maryland
The Kelley-Koett Mfg. Co., Inc., Covington, Kentucky
Kellogg Company, Battle Creek, Michigan
Lea & Febiger, Philadelphia, Pennsylvania
Lederle Laboratories, New York, New York
Libby, McNeill & Libby, Chicago, Illinois
J. B. Lippincott Company, Philadelphia, Pennsylvania
M & R Dietetic Laboratories, Inc., Columbus, Ohio
Mead Johnson & Company, Evansville, Indiana
Medical Arts Supply Company, Chicago, Illinois
Medical Film Guild, New York, New York

The Medical Protective Company, Fort Wayne, Indiana
The Mennen Company, Newark, New Jersey
Wm. S. Merrell Company, Cincinnati, Ohio
The C. V. Mosby Company, St. Louis, Missouri
V. Mueller & Company, Chicago, Illinois
Nutrition Research Laboratories, Chicago, Illinois
Oxygen Equipment & Service Company, Chicago, Illinois
Parke, Davis & Company, Detroit, Michigan
The E. L. Patch Company, Boston, Massachusetts
Pet Milk Sales Corporation, St. Louis, Missouri
Philip Morris & Company, Ltd., Inc., New York, New York
Poloris Company, Inc., Jersey City, New Jersey
The Proctor & Gamble Company, Cincinnati, Ohio
W. B. Saunders Company, Philadelphia, Pennsylvania
Schering Corporation, Bloomfield, New Jersey
G. D. Searle & Co., Chicago, Illinois
Sharp & Dohme, Inc., Philadelphia, Pennsylvania
Singer Sewing Machine Company, New York, New York
Smith, Kline & French Laboratories, Philadelphia, Pennsylvania
Spencer, Incorporated, New Haven, Connecticut
E. R. Squibb & Sons, New York, New York
Sutliff & Case Company, Inc., Peoria, Illinois
Westwood Pharmacal Corporation, Buffalo, New York
White Laboratories, Inc., Newark, New Jersey
Winthrop Chemical Company, Inc., New York, New York
Wyeth Incorporated, Philadelphia, Pennsylvania
Zimmer Manufacturing Company, Warsaw, Indiana

# NOTES ON TECHNICAL EXHIBITS

### ABBOTT LABORATORIES, Booth No. 63

A hearty welcome awaits you here
Sol In this booth be stepping
To chat with Abbott men sincere
Your knowledge to be pepping
On Pentothal and Sulfa Drugs
On Vitamins and Pollens
On Metaphen for killing bugs
In Ampoules and in Gallons.
Moral: Be sure to stop at 63
Our line of Abbott drugs to see.

### A. S. ALOE, Booth No. 109

A. S. Aloe Company will exhibit a cross section of their complete line of instruments, equipment and supplies. Included will be Stainless Steel surgical instruments available for delivery, the Aloe Magnalite which provides a combination of a fully adjustable office light with high-powered magnification for splinter, foreign-body work, etc., the Goth Sulfonamide Testing Set, and other interesting new developments.

In charge of the Aloe display will be Mr. Lewis Frazin, Chicago manager.

### AMERICAN HOSPITAL SUPPLY CORPORATION, Booth No. 15

Baxter Intravenous Solutions and Blood, Plasma, and Serum Equipment will be a feature of the American Hospital Supply Corporation booth. Solutions in the famous Baxter Vacoliter will be displayed, along with such transfusion equipment as Transfuso-Vacs, Plasma-Vacs, and Centri-Vacs. Trained staff members will be in attendance to explain and answer questions on all phases of the Baxter intravenous techniques.

Also on display will be many specialty items of importance to better hospital routine and service.

### THE ARMOUR LABORATORIES, Booths 82 and 83

The Armour Laboratories extend a cordial invitation to the members of the Illinois State Medical Society to visit their exhibit in Booths 82 and 83.

If you have not already received a copy of the new Armour book on "The Thyroid Gland and Clinical Application of Medicinal Thyroid", you may secure one by inquiring at our display.

Representatives in attendance at the Armour exhibit will welcome your inquiries on the more recent developments in Endocrinology.

### AYERST, McKENNA & HARRISON, LIMITED, Booth No. 99

"Premarin", a highly potent, naturally-occurring complex of conjugated estrogens, will be featured.

"Premarin" constitutes a recent advancement in endocrine research resulting from the collaboration of Dr. J. B. Collip, Director of the Research Institute of Endocrinology, McGill University, with our Laboratories.

### BILHUBER-KNOLL CORPORATION, Booth 79

A complete line of our fine medicinal chemicals is on display for your inspection. Among these useful products are: Bromural — a sedative and mild hypnotic; Dilaudid — analgesic and cough sedative; Metrazol — stimulant and restorative; Octin — antispasmodic in ureteral and like spasms; Theocalcin and Phyllicin — diuretic and myocardial stimulants.

These and our other products may be prescribed alone or in combination with other drugs. Thus you can individualize your prescriptions for them to the needs of each patient.

At our booth Messrs. Art Murbach and Basil Kidwell will welcome your visits. They invite your discussions on the practical and scientific use of our every-day prescription chemicals.

### ERNST BISCHOFF COMPANY, Booth No. 75

In our exhibit we shall feature Lobelin Bischoff, respiratory stimulant and resuscitant in asphyxia neonatorum; Anayodin, an effective nontoxic amebacide; Diatussin and Diatussin Syrup, antispasmodic; Activin, a foreign protein for non-specific therapy; Viscysate, for the symptomatic relief of hypertension; Sas-Par, antipruritic, oral treatment for Psoriasis.

### THE BORDEN COMPANY, Booth No. 80

A cordial welcome awaits you at the Borden Booth. There on display is a line of scientific infant formula foods which our representative will be pleased to discuss with you. BIOLAC, NEW IMPROVED DRYCO, MULL-SOY, KLIM, BETA LACTOSE, and MERRELL-SOULE POWDERED MILKS.

### THE BURDICK CORPORATION, Booth No. 100

The Burdick Corporation will exhibit selected items from their line of Physical Therapy Equipment. Infra-red and Ultraviolet Lamps will be featured, as well as the Rhythmic Constrictor for the treatment of peripheral vascular disease. Doctors are invited to register for the Burdick Syllabus, a periodical of clinical material on the use of Physical Therapy.

### BURROUGHS WELLCOME & COMPANY, Booth No. 98

Burroughs Wellcome & Co., New York, presents a representative group of fine chemicals and pharmaceutical preparations, together with new and important therapeutic agents of special interest to the medical profession.

### CAMBRIDGE INSTRUMENT COMPANY, INC., Booth No. 8

### CAMEL CIGARETTES, Booths 103 & 104

CAMEL Cigarettes will exhibit large detailed photographs of equipment used in comparative tests of the five largest-selling brands of cigarettes. Dramatic visualization of nicotine absorption in the human respiratory tract from cigarette smoke will be demonstrated.

International news with the CAMEL Cigarette Trans-Lux "Flash Bulletins", may be seen while enjoying a supply of slow-burning CAMEL Cigarettes.

### CARNATION COMPANY, Booth No. 101

You are invited to visit the Carnation Company booth where you will see an unusual reproduction of the Carnation Milk Farm and find presented some interesting information on the various uses of Irradiated Carnation Milk for infant feeding, child feeding, and general diet purposes.

Valuable literature will also be available for distribution.

### CIBA PHARMACEUTICAL PRODUCTS, INC., Booth No. 71

Physicians are cordially invited to visit our booth where a CIBA representative will answer questions regarding CIBA specialties, and discuss in detail our newest preparations: Privine Hydrochloride, a powerful nasal vasoconstrictor with a prolonged action, a product which has already gained considerable recognition in its field; and Metandren Linguets, newest form of Metandren, most potent androgen

available for oral use. Clinical investigation indicates that this method of sublingual administration results in greater potency.

### THE COCA-COLA COMPANY, Booth No. 5

Coca-Cola will be served to the delegates with the compliments of The Coca-Cola Company.

### F. A. DAVIS COMPANY, Booth No. 65

The F. A. Davis Company is here offering a complete line of medical books of timely interest for examination by convention visitors.

Among the many newer books are "The Romance of Medicine" by Dr. B. L. Gordon; "Sulfonamide Therapy in Medical Practice" by Dr. F. C. Smith; "Segmental Neuralgia in Painful Syndromes" by Drs. B. D. Judovich and W. Bates; "The Diagnosis and Treatment of Acute Medical Disorders" by Dr. F. D. Murphy; "The Adrenal Glands in Health and Disease" by Dr. M. A. Goldzieher, and others which will be ready soon.

### DOAK COMPANY, Booth No. 84

If you are interested in dermatological problems, visit our booth. Perhaps we can help you with our suggestions and remedies.

### DOHO CHEMICAL CORPORATION, Booth No. 72

The Auralgan Exhibit consists of a model of the human auricle four feet high together with a series of twenty-four three dimensional ear drums, modelled under the supervision of outstanding otologists. Each of these drums depicts a different pathologic condition based upon actual case observation and prepared, in so far as possible, with strict scientific accuracy so as to be highly instructive and interesting to all physicians.

### ELI LILLY AND COMPANY, Booth No. 58

The Lilly exhibit will feature an anatomical model illustrating the technics of caudal and spinal anesthesia. Lilly products will be on display, and medical service representatives will be present to assist visiting physicians in every possible way.

### C. B. FLEET CO., INC., Booth No. 106

An ethical product for over half a century — a saline eliminant.

What may you, as a physician, expect from this stable, non-toxic concentrate of the two U.S.P. sodium phosphates?

1. Accurate dosage, regulated to the patient and to his condition.
2. The maximum therapeutic effectiveness of sodium phosphate.
3. Quick, gripeless evacuation, for emergencies.
4. Mild, controllable elimination, for chronic bilary disturbance or constipation.
5. Unusual freedom from after-irritation, with normalizing buffer action.
6. Safe action with administration of the sulfonamides.

Are you getting the full value of medication in your daily problems of elimination?

### FLINT, EATON AND COMPANY, Booth 92

A new method for tropical application of the Sulfonamides will be the major product exhibited at the Flint, Eaton and Company booth. Trained men will be on hand to answer your questions regarding the use of this product as well as other important Flint, Eaton and Company specialties.

### GERBER PRODUCTS COMPANY, Booth No. 70

Gerber's CEREAL FOOD and STRAINED OATMEAL are enriched with vitamins of the B-complex and with iron. They are ready to serve upon addition of milk or formula. These and other Gerber Foods are on display.

We invite your inspection of the Gerber literature.

### GENERAL ELECTRIC X-RAY CORPORATION, Booth No. 4

Although working around the clock to meet production schedules essential to the war effort, the General Electric X-Ray Corporation is not unmindful of the need for expert maintenance service by owners of x-ray and other electro-medical equipment. **G. E.'s Periodical Inspection and Adjustment Service** continues to function, now as in the pre-war years, through branch offices and regional service depots throughout the country. Stop in at the G. E. exhibit space for further information on "P.I. and A." Service. At the same time you can obtain interesting facts about the use of photo-roentgenography in mass x-ray chest surveys, and see a demonstration of the G-E Orthostereoscope, for viewing stereoscopic 4 x 5 inch chest photo-roentgenograms.

### OTIS E. GLIDDEN AND COMPANY, Booth No. 67

Physicians may obtain latest information on Zymenol, a natural therapy for Gastro-Intestinal Dysfunction — effective without catharsis, artificial bulkage or large doses of mineral oil — cannot affect vitamin absorption — at the Otis E. Glidden and Company booth.

### THE HARROWER LABORATORY, INC., Booth No. 73

This display will consist of literature and samples of standardized endocrine products for both oral and parenteral administration. Products derived from the Adrenal Cortex, Pituitary and Thyroid glands will predominate. Harrower products also include digestive enzyme preparations and these will be on exhibition. The Harrower display will be in charge of competent representatives during the meeting.

### H. J. HEINZ COMPANY, Booth No. 74

H. J. Heinz Company offers you: 11th edition of the NUTRITIONAL CHART and its supplement, the NUTRITIONAL OBSERVATORY. A special feature is YOUR BABY'S DIARY AND CALENDAR. Physicians prescribing soft, bland and low residue diets will be interested in the SPECIAL DIETARY FOODS BOOK.

Physicians practicing pediatrics realize the importance of Heinz Strained Junior Foods and Pre-Cooked Cereal Food and especially today recommend their use to mothers engaged in wartime industries for their young children.

### HORLICK'S MALTED MILK CORPORATION, Booth No. 12

The Horlick's Malted Milk Corporation, Racine, Wisconsin, is exhibiting Horlick's Malted Milk, in both natural and chocolate flavors, powder and tablets. Members of the profession are especially invited to enjoy a delicious drink of Horlick's. Malted Milk Fortified with vitamins A, $B_1$, D and G. Our representatives in attendance will be only too glad to answer any inquiries and explain the qualities of our products.

### HYNSON, WESTCOTT & DUNNING, INC. Booths No. 13 and 14

Prominent among the products exhibited will be Mercurochrome, now in the 23rd year of acceptance by the Council on Pharmacy and Chemistry of the American Medical Association. Sterile Shaker Packages of Crystalline Sulfanilamide, developed in the H. W. & D. laboratories in cooperation with military authorities for use in the treatment of wounds, will also be displayed.

Thantis Lozenges and Lutein Extract Ampules, in addition to the diagnostic solutions and apparatus supplied by the manufacturers, will be featured. The clinical effectiveness of Lutein Extract, an aqueous extract of corpus luteum, in the treatment of obstetrical complications, especially threatened and habitual abortion, will be illustrated by especially prepared diagrams. Visiting delegates are invited.

### THE KELLEY-KOETT MFG. CO., INC., Booth No. 20

### KELLOGG COMPANY, Booth No. 60

All Kellogg's ready-to-eat cereals either are whole grain, natural, restored or fortified.

Kellogg's Pep Whole Wheat Flakes is fortified with additional vitamins $B_1$ and D. One serving (1 ounce) furnishes one-fourth the minimum daily requirement for adults for thiamin (vitamin $B_1$), and sufficient vitamin D to meet all daily requirements for that vitamin.

Corn Flakes and Rice Krispies, contributing whole grain values of thiamin (vitamin $B_1$), niacin, and iron, may be included freely in wheat-free and low residue diets.

Nutrition information and diet lists are available at the Kellogg booth.

### LEA & FEBIGER, Booth No. 91

Lea and Febiger will exhibit, among their new works, Lewin on "Backache and Sciatica," Lichtman on the "Gallbladder," Dyke and Davidoff's "Roentgen Treatment of Diseases of the Nervous System," Moon on "Shock," and Moritz on "Pathology of Trauma." New editions will be shown of Gray's "Anatomy," Levinson and MacFate's "Clinical Laboratory Diagnosis," Ormsby and Montgomery on "Diseases of the Skin," Ballenger on the "Ear, Nose and Throat," Boyd's, "Textbook of Pathology," Kraines' "Therapy of the Neuroses and Psychoses," Craig and Faust's, "Clinical Parasitology," Rhinehart's, "Roentgenographic Technique" and Bell's "Textbook of Pathology."

### LEDERLE LABORATORIES, INC., Booth No. 62

Lederle Laboratories, Inc., will show their complete line of biologicals and specialty pharmaceuticals and will have in attendance a number of local men who will be qualified to answer inquiries from visiting physicians.

All of the "Sulfa" drugs will be shown in their various forms. Also the newer advances in antitoxins, serums and antibacterial serum will be exhibited.

### LIBBY, McNEILL & LIBBY, Booth No. 102

Libby's strained and homogenized baby foods are featured at the Libby booth. Physicians are invited to stop and discuss new findings on the greater availability of iron and ease of digestion of Libby's Council Accepted foods for babies.

### J. B. LIPPINCOTT COMPANY, Booth No. 89

Lippincott's headliner is the new one-volume War Edition of Thorek's MODERN SURGICAL TECHNIC. Other significant and timely new Lippincott books are Bacon's ESSENTIALS OF PROCTOLOGY . . . Brown & McDowell's SKIN GRAFTING OF BURNS . . . Cope's COCOANUT GROVE BURNS, Management at the Massachusetts General Hospital 111 Ferguson's SURGERY OF THE AMBULATORY PATIENT . . . Kampmeier's ESSENTIALS OF SYPHILOLOGY . . . Sappington's ESSENTIALS OF INDUSTRIAL HEALTH . . . Strecker's FUNDAMENTALS OF PSYCHIATRY.

Be sure to see the brand new 4th edition of Dr. Thorek's SURGICAL ERRORS AND SAFEGUARDS!

### M & R DIETETIC LABORATORIES, INC., Booth No. 66

M & R Dietetic Laboratories, will display Similac, a food for infants deprived either partially or entirely of breast milk; also powdered SofKurd.

Mr. E. M. Stevens and Mr. A. E. Boodel will appreciate the opportunity to discuss the merit and suggested application of these products.

### MEAD JOHNSON & COMPANY, Booths No. 107 and 108

"Servamus Fidem" means We Are Keeping the Faith. Almost every physician thinks of Mead Johnson & Company as the maker of Dextri-Maltose, Pablum, Oleum Percomorphum and other infant diet materials — including the new precooked oatmeal cereal, Pabena. But not all physicians are aware of the many helpful services this progressive company offers physicians. A visit to our booths will be time well spent.

### MEDICAL ARTS SUPPLY COMPANY, Booth No. 17

Our exhibit will include a suite of Hamilton Furniture, the Supersight examining lamp which magnifies and illuminates at the same time, physician's scale, and miscellaneous surgical instruments and specialties.

### MEDICAL FILM GUILD, Booth No. 7

Medical Film Guild emphasizes its talking papers in this year's program of "MEDICAL FILMS THAT TEACH." Hospital and Medical Society program chairmen, now faced with depleted staffs because of the war emergency, who desire educational material for their meetings, find that Medical Film Guild's motion picture film textbooks answer that important problem. Through grants for post graduate instruction these films are available at no charge to any hospital or medical society meeting and to the medical services connected with the Armed Forces of the United States. Exhibition is also included at no charge under this plan.

Subjects available are: Inguinal Hernioplasty, Asphyxia Neonatorum, Non-operative Treatment of Paranasal Sinusitis, Otitis Media in Pediatrics, A Clinic on Acute Mastoiditis, Otoscopy in the Inflammations, A Clinic on Sigmoid Sinus Thrombosis, Pharmacology of Respiratory Stimulants, A Clinic on Chronic Otitic Purulencies, and Amebiasis and Its Treatment.

### THE MEDICAL PROTECTIVE COMPANY, Booth No. 18

The Medical Protective Company's representative, thoroughly trained in Professional Liability underwriting, invites you to visit our exhibit booth. He is entirely familiar with the principles of the reciprocal rights and duties of a doctor and patient and with the circumstances peculiar to that relationship.

He will be glad to explain how his Company meets the exacting requirements of adequate liability protection, which are peculiar to the Professional Liability field.

### THE MENNEN COMPANY, Booth No. 85

The Mennen Company will exhibit their two baby products — Mennen Antiseptic Baby Oil and Mennen Antiseptic Baby Powder, in addition to their fungicidal foot powder — Quinsana.

The Antiseptic Oil is now being used routinely by more than 90% of the hospitals that are important in maternity work.

Be sure to register at the Mennen exhibit for the Lucky Number Prize Drawing to be held on the last day of the convention.

The Mennen exhibit will be in charge of Mr. G. H. Lubin and Mr. R. E. Slentz.

### THE WM. S. MERRELL COMPANY, Booth No. 21

Particular attention is called to a new development of Merrell Research for local treatment of pyogenic infections — Sulfa-Ceepryn Cream, which employs the unique detergent-germicide, Ceepryn, to reinforce the balanced bacteriostatic action of sulfathiazole and sulfanilamide. Other Merrell prescription specialties of established usefulness in clinical medicine also will be displayed.

### THE C. V. MOSBY COMPANY, Booth No. 90

A cordial invitation is extended to visit The C. V. Mosby Company booth where he will display a complete line of medical publications.

Many recent releases of timely interest will be shown and our representative will be glad to serve you in any way possible.

### V. MUELLER & COMPANY, Booths No. 1 and 2

A representative selection of instruments and equipment for eye, ear, nose and throat, orthopedic, urological and general surgery, will be displayed in the Mueller Exhibit. The latest in modern medical furniture will also be shown.

### NUTRITION RESEARCH LABORATORIES, Booths No. 68 and 69

Nutritional Research Laboratories, Chicago, will again feature Ertron, used extensively by the medical profession in treating chronic arthritis. New clinical literature and information pertaining to the product will be available for members and guests of the Society.

Bezon, Whole Natural Vitamin B. Complex in tabule form, and companion products will also be on display.

Representatives of the company will be available at the booth at all times, and will welcome the opportunity of discussing our products with the physicians attending the meeting.

### OXYGEN EQUIPMENT & SERVICE COMPANY, Booth No. 57

Many new and interesting developments in inhalational therapy can be seen at the Oxygen booth. These will include the Dry Ice Oxygen Tent, the E & J Resuscitator, Aviation Type Face Masks, and the highly efficient S.O.S. Insufflation Unit.

Representatives who are specialists in the field of Oxygen Therapy will be glad to answer any questions on the new techniques and uses of oxygen and will demonstrate different types of equipment.

### PARKE, DAVIS & COMPANY, Booth No. 3

At the Parke-Davis Exhibit which has been streamlined because of present war-time requirements, you will find many new and scientific Pharmaceutical and Biological Products. Included in this display are such outstanding preparations as Phemerol, a relatively non-toxic and non-irritating germicide and antiseptic; Vitamin Products; Sulfa Drugs; Despeciated Antitoxins, and numerous other outstanding products of timely interest.

Able and courteous members of the Parke, Davis & Company Staff are in daily attendance to serve you.

### THE E. L. PATCH COMPANY, Booth No. 81

The Patch representatives will welcome your visit to their booth. We plan to feature Gadoment, America's original cod liver oil ointment; Kondremul, a gentle, pleasant-tasting Irish moss-mineral oil emulsion; Secremol, a pleasant-tasting ammonium chloride cough preparation which has the added feature of a wetting agent to increase its efficacy; Trimagnol, a new and different antacid tablet containing magnesium trisilicate and vitamin C; and Thiasulfamix, a cream containing sulfanilamide and sulfathiazole for use on wounds and skin lesions.

### PET MILK SALES CORPORATION, Booths No. 93 and 94

A complete display of material illustrating the time-saving Pet Milk services available to physicians.

Specially trained representatives will be in attendance

to give you information about the production of Pet Milk and its use for infant feeding. Miniature cans will be given to physicians visiting the exhibit.

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### PHILIP MORRIS & COMPANY, LTD., INC., Booth No. 78

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes.

Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

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### POLORIS COMPANY, INC., Booth No. 11

The Poloris Company's exhibit will feature an interesting display of the medicinal ingredients contained in Poloris Dental Poultice.

This display has been designed to acquaint the members of the medical profession with the purpose of Poloris Dental Poultice, namely, local medicinal counterirritation for the prompt emergency relief of irritation, inflammation or congestion of the teeth and gums. Members and their guests are cordially invited to visit the Poloris exhibit.

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### THE PROCTER & GAMBLE COMPANY, Booth No. 59

At the Procter & Gamble booth, visitors will be acquainted with the qualities of Ivory Soap which have resulted in Ivory's being recommended, "By more doctors than all other brands of soap together."

Copies of Ivory's popular booklet, "Bathing Your Baby the Right Way," prepared with the cooperation of a world-famous maternity center, will be available free of charge to visitors.

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### W. B. SAUNDERS COMPANY, Booth No. 110

This publishing house will exhibit their complete line of books. Included among the new books to be shown are. Bockus' 3-volume work on "Gastro-enterology," 5th edition of Christopher's "Minor Surgery," Erich & Austin's "Traumatic Injuries of Facial Bones," Hoffman's "Female Endocrinology," Moll's "Aesculapius in Latin America," Orr's 1-volume "Operative Surgery," McComb's "Internal Medicine in General Practice," Shaar & Kreuz "External Fixation of Fractures," Lundy's "Anesthesia," Warton's "Gynecology and Female Urology," the Military Medical and Surgical Manuals, Official U. S. Public Health Service Industrial Hygiene Manual, Stieglitz' "Geriatrics," Weiss & English's "Psychosomatic Medicine," and many others.

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### SCHERING CORPORATION, Booth No. 77

Schering Corporation, in line with their policy of bringing out the latest in endocrine research, is featuring the new estrogenic product — ESTINYL Tablets.

ESTINYL, a derivative of the natural hormone alpha-estradiol, is most economical and is orally effective in dosage of .02 and .05 mg. It produces very little nausea and toxic side effects.

Other Schering preparations on display will be ORETON-F Pellets, ORETON, ORETON-M Tablets, PROGYNON-B, PRANONE, PROLUTION, and CORTATE, and the diagnostic products for X-Ray — NEO-IOPAX and PRIODAX.

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### G. D. SEARLE & COMPANY, Booth No. 76

G. D. Searle & Company will show a number of new products of Searle Research which have contributed so much to the recent armamentarium of the physicians.

Products such as Searle Aminophyllin, Metamucil, Ketochol, Floraquin, Gonadophysin, Tetrathione, Pavatrine, are results of this research which has been greatly expanded in the new Searle Laboratories.

An illustration of the new Laboratories will be featured in the exhibit

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### SHARP & DOHME, INC., Booth No. 87

Sharp & Dohme will have a display featuring their new sulfonamide, Sulfamerazine, and also 'Sulfasuxidine', 'Lyovac' Normal Human Plasma, Tyrothricin Concentrate (Human), 'Depropanex', 'Delvinal' Sodium, 'Propadrine' Hydrochloride products and 'Iyovac' Tetanus Antitoxin Bovine.

Capable, well-informed representatives will be on hand to welcome all visitors and furnish information on Sharp & Dohme products.

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### SINGER SEWING MACHINE COMPANY, Booths No. 9 and 10

Specially trained demonstrators will exhibit the Singer Surgical Stitching Instrument. This instrument, which was developed in close cooperation with the surgical profession, has attracted much attention at medical conventions and clinical trials have definitely proved its success and practicability.

All doctors, nurses and hospital staff members are cordially invited to see this unique contribution to surgery. Motion pictures of operations showing the instrument in use will be shown, and free literature describing the instrument in detail will be available.

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### SMITH, KLINE & FRENCH LABORATORIES, Booth No. 86

Benzedrine Sulfate Tablets and 'Paredrine' — Sulfathiazole Suspension are featured at this exhibit.

The potent central nervous stimulation of Benzedrine Sulfate offers, throughout a wide range of application, "a therapeutic rationale which, in its very efficiency, cuts across the old categories."

Paredrine-Sulfathiazole Suspension is the only vasoconstrictor-Sulfonamide combination which combines **prolonged** bacteriostasis, **non-stimulating** vasoconstriction, and therapeutically **ideal** PH. Not a solution, but an aqueous suspension of 'micraform' crystals of free sulfathiazole, it produces no irritation, no stinging and no hyperemia.

Our especially trained professional representatives will be glad to discuss with you the potentialities and possible indications of our products in your own practice.

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### SPENCER, INCORPORATED, Booth No. 88

An interesting exhibit featuring individually designed supports for abdomen, back and breasts. Spencer Supports are prescribed as an aid to treatment for the following: Hernia — Visceroptosis with symptoms — Postoperative — Back Conditions — Maternity and Postpartum — Obesity — Movable Kidney — Breast Conditions and certain forms of Heart Disease.

Samples are on display and trained representatives will be available to answer your questions.

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### E. R. SQUIBB & SONS, Booth No. 61

Physicians attending the Illinois State Medical Society meeting are cordially invited to visit the Squibb exhibit. Several new items will be shown. Among them is Intocostrin, the standardized Purified Curare Extract now widely used to soften convulsion in shock therapy; a new, highly useful therapeutic multi-vitamin preparation; a sulfathiazole-ephedrine-derivative combination for ophthalmic use.

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### SUTLIFF & CASE COMPANY, INC., Booth No. 105

Sutliff & Case Co., Inc. of Peoria, Illinois, will have on display a few of the outstanding Pharmaceuticals, and their representative who calls on you will be present to greet you. Be sure to see us and renew old acquaintances.

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### WESTWOOD PHARMACAL CORPORATION, Booth No. 55

The Westwood Pharmacal Corporation will feature LOW-ILA CAKE, a lathering detergent in cake form; and WEST-HIAZOLE, solutions of Sulfathiazole.

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### WHITE LABORATORIES, INC., Booth No. 19

At the White Laboratories booth you will find interesting copies of a series of publications under the general title "Diagnostic Aids to Vitamin Deficiency Conditions." Medical Service Representatives in attendance will be very glad to discuss these with you.

The latest clinical reports on results of the use of White's Vitamin A and D Ointment in the treatment of burns and various types of ulcers will also be available. This is a product which you will undoubtedly find of great interest.

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### WINTHROP CHEMICAL COMPANY, INC., Booth No. 56

Winthrop Chemical Company, Inc. extends a cordial invitation to visit their booth where representatives will gladly discuss any of the numerous preparations, introduced by this firm, which are of special interest to you. Valuable booklets are available dealing with anesthetics, chemotherapeutic agents, hypnotics, sedatives, antisyphilitics, diagnostics, diuretics, vasodilators, vitamins and hormones.

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### WYETH INCORPORATED, Booths No. 95, 96 and 97

Wyeth Incorporated invite you cordially to visit their booths which will feature the medical specialties of their nutritional, biological and pharmaceutical divisions.

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### ZIMMER MANUFACTURING COMPANY, Booth No. 6

Zimmer Manufacturing Company, Warsaw, Indiana, will exhibit a complete line of splints and bone instruments. The Reduction-Retention Apparatus for external skeletal fixation will be featured, as well as the Stryker Screw Driver, which holds screws with complete rigidity.

# WOMAN'S AUXILIARY PROGRAM

**(All General Meetings and Social Activities are Open to All Doctors' Wives.)**

**TUESDAY, MAY 16, 1944**
**PALMER HOUSE**

9:00 a.m. Registration — Lounge Floor — Club Building.
Mrs. C. C. Kane, East St. Louis, Chairman
Mrs. A. J. Linowiecki, Chicago, Vice-Chairman

10:00 a.m. Pre-Convention Board Meeting, Oval Room, Club Building.
Mrs. Milton A. Nix, Princeton, Presiding.

12:00 Adjournment.

1:30 p.m. Opening General Meeting, Dining Room, Club Building
Mrs. Milton A. Nix, Princeton, Presiding.
(All Doctors' Wives and Guests Invited)
Invocation.
Pledge to Flag.
Auxiliary Pledge.
Welcome — Mrs. Roy Hutchison, President, Woman's Auxiliary to the Chicago Medical Society.
Response — Mrs. George Kirby, President, Woman's Auxiliary to the Bureau County Medical Society.
Opening Business Session.
Report: Credentials and Registration — Mrs. C. C. Kane.
Convention Announcements — Mrs. Frederick Tice.
Roll Call — Mrs. E. W. Burroughs.
Treasurer's report, and Auditor's report — Mrs. E. C. Beatty.
Annual Reports of Officers.
Annual Reports of Councilors.
Annual Reports of Chairmen of Standing Committees.
Annual Reports of County Presidents.

3:30 p.m. "State Medicine" — Dr. Rollo K. Packard, Past-President, Illinois State Medical Society, Chicago.

6:00 p.m. Dinner — Dining Room of the Club Building.
Mrs. W. J. Wanninger, Chairman.
Introduction of Honored Guests, Officers and Committees.
Greetings — Dr. Everett P. Coleman, President-Elect, Illinois State Medical Society, Canton.
Speaker — Dr. J. P. Simonds, Past-President, Chicago Medical Society.
Program — Musical numbers.
Mrs. Frederick Tice, Chairman.
Adjournment.

**WEDNESDAY, MAY 17, 1944**
**PALMER HOUSE**

9:45 a.m. General Session — Dining Room of the Club Building.
Mrs. Milton A. Nix, Presiding.
Memorial Services conducted by Mrs. P. P. Youngberg.
Roll Call — Mrs. E. W. Burroughs.
Report — Credentials and Registration — Mrs. C. C. Kane.
Convention Announcements — Mrs. Frederick Tice.
Final Reports.

10:45 a.m. Symposium — "Problems of the Auxiliary"
Mrs. Lucius Cole, Presiding.

11:15 a.m. Final Reports — Credentials and Registration — Mrs. C. C. Kane.
Resolutions — Mrs. L. A. Burhans, Chairman.
Election of Officers.
Installation of Officers.
Response — Mrs. Alfred Gariess.
Presentation of President's Pin.
Adjournment.

12:30 p.m. President's Luncheon — Foyer of Grand Ballroom.
Mrs. Roy Hutchison, Chairman.
Introduction of Past-Presidents.
Mrs. John R. Neal, Past-President, Woman's Auxiliary, Illinois State Medical Society, Chicago.
Introduction of Guests and New Officers.
Greetings — Dr. Frank P. Hammond, Chairman of the Advisory Committee, Woman's Auxiliary, Illinois State Medical Society, Chicago.
"Medical Benevolence" — Dr. Harold M. Camp, Secretary, Illinois State Medical Society, Monmouth.
Address — Dr. J. J. Moore, President-Elect, Chicago Medical Society, Chicago.

2:30 p.m. Post-Convention Board Meeting — Oval Room — Club Building.
Mrs. Alfred Gariess, Presiding.

3:30 p.m. Tea and Tour to the Art Institute.



# Correspondence

## AMERICAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS CONVENTION

The American Association of Industrial Physicians and Surgeons is holding its annual convention in St. Louis, Mo., on May 10, 11, and 12, 1944. The headquarters will be at the Jefferson Hotel.

Clinics will be presented by the medical faculty of the St. Louis University Medical School at the Desloge Hospital on May 10 and by the medical faculty of the Washington University Medical School at the Barnes Hospital on May 11. The scientific meetings will be held at the Jefferson Hotel and will consist of timely presentations relative to industrial health, toxicology, rehabilitation, and other subjects pertinent to the practice of industrial medicine and surgery.

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## AMERICAN PHYSICIANS' ART ASSOCIATION

will have its seventh annual exhibit at the A. M. A. convention, Stevens Hotel, June 12-16, 1944.

Everyone was impressed by the beauty of the Art Exhibition at the Atlantic City Session last year, but the 1944 Gallery in the main ballroom balcony will be even more beautiful and impressive.

Through the courtesy of Mead Johnson & Co., Evansville, Ind., there will be no fees for hanging and no express charges either way. The type of art to be exhibited includes personal work of the following types of medium: oil portraits, oil still life, landscapes, sculpture, water color, pastels, etchings, photography, wood craving leather tooling, ceramics and tapestries (needle work). All pieces should be sent perferably by railway express collect, automatically covered with $50 insurance.

Exhibitors should send now for entry blanks to Dr. Francis H. Redewill, Secretary, A. P. A. A., Flood Building, San Francisco; one entry blank should be used for each medium in which it is desired to exhibit.

There will be about 100 trophies, including medals and plaques.

Artist-physicians desiring to exhibit their works at the June A. M. A. Meeting should ship their works not later than May 20th to the following address:

American Physicians Art Association, Room 1302, 308 W. Washington St., Chicago, Ill. Pack carefully and ship by express collect, including $50 insurance.

Mead Johnson & Company have offered to pay the express charges both ways (including insurance up to $50).

Art objects exhibited are automatically eligible for inclusion in the next Parergon, as well as for one of the numerous A. P. A. Ass'n prizes.

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Tuberculosis in state hospitals is a larger problem than has been generally recognized. It is to be expected that 4% of the patients will have active pulmonary tuberculosis. Unless these patients are found, they constitute a source of contagion to the entire population. Joseph R. Blalock, M.D. and James B. Funkhouser, M.D. Annuals of Internal Medicine, August, 1943.

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★ BUY AN EXTRA BOND ★

# Original Articles

## OBSERVATION ON THE CLINICAL APPLICATION OF DIASONE* IN HUMAN TUBERCULOSIS[1]

(an eight month study)

CHARLES K. PETTER, M. D., F. A. C. S.[2, 3]
WERNER S. PRENZLAU, M. D.[3]
WAUKEGAN

Looking back over many experiences in which substances of one kind or another have been tried and advocated for treating tuberculosis, only with hesitation can one approach the discussion of *another* chemotherapeutic agent. Years past have seen the failure of tuberculin, gold, copper, the rare earths, aniline dyes, chaulmoogra oil and calcium.[1, 2] By the results of more recent animal experiments with the sulfonamides and lastly the sulfones, one is given renewed courage. While sulfamilamide, sulfapyridine and sulfadiazine demonstrated only slight deterent effects on guinea pig tuberculosis[3, 4, 5], diamino diphenyl sulfone and three or four of its derivatives have been shown to possess a striking ability to favorably alter tuberculosis in the guinea pig.[6, 7]

Diasone, after thorough tests for toxicity and tuberculotherapeutic effect in animals, has been administered under our supervision to 108 tuberculous patients. Careful observations were made on these persons, who have received both large and small total doses of the compound. A review of such observations, over a period of 8 months constitutes this report.

Because of the similarity between early pulmonary infiltrates in the human and the lesions found in experimental animals, we sought only such early cases for treatment at the beginning of the study. Before long, however, the compound was being put to a severe test in all stages and manifestations of tuberculosis. Patients with and without previous sanatorium care and those ambulant as well as bed-fast were started on treatment. Table 1. shows the numbers and types of cases who have received Diasone. Thirty patients treated less than 60 days are not discussed in this report. Twenty persons received diasone from 60 to 89 days, 8 from 90 to 120 days, while fifty were treated more than 120 days. Seventy-eight persons, of whom seventy-two had pulmonary lesions and six had extra pulmonary disease, received Diasone for periods ranging from 60 to 275 days.

Diasone was administered *orally* to all patients and applied locally as well to empyema cavities and abscesses about joints.* At the outset, administration was started and maintained at 0.33 gm with each meal (1.0 gm per day). A few patients were given up to 2.0 gm in 24 hours. After a period of 2 or 3 months, we began medication at 0.33 gm per day for 3 days, 0.66 gm for another 3 to 5 days and then 1.0 gm per day from there on. This seemed to be accompanied by better tolerance. Likewise giving the compound 5 or 6 days of the week with a rest period of one or two days permitted continued medication in some cases. During the past month we have used some enteric coated capsules, appar-

1. Read by invitation before the section on Medicine, Philadelphia College of Physicians, November 22, 1943.
2. From the Department of Medicine, Northwestern University Medical School, and
3. Lake County Tuberculosis Sanatorium, Waukegan, Illinois.

*Disodium formaldehyde sulfoxylate diaminodiphenyl sulfone. The Diasone used in this investigation was supplied thru the courtesy of J. F. Biehn, M.D. — Medical Director of Abbott Laboratories, North Chicago, Illinois.

*Subject of report in preparation.

CLASSIFICATION AND DAYS OF TREATMENT
All Cases Receiving Diasone.

| | Total All Cases | Total for days of Administration -60 | 60-89 | 90-120 | 120+ | Total 60-120+ |
|---|---|---|---|---|---|---|
| PULMONARY | | | | | | |
| Minimal | 11 | 2 | 3 | 2 | 4 | 9 |
| Mod. Adv. | 57 | 15 | 10 | 2 | 30 | 42 |
| Far Adv. | 30 | 9 | 4 | 2 | 15 | 21 |
| Total | 98 | 26 | 17 | 6 | 49 | 72 |
| EXTRA-PULM. | | | | | | |
| Bone & Joint | 7 | 2 | 2 | 2 | 1 | 5 |
| Genito-Urin. | 2 | 1 | 1 | 0 | 0 | 1 |
| Peritoneal | 1 | 1 | 0 | 0 | 0 | 0 |
| Total | 10 | 4 | 3 | 2 | 1 | 6 |
| Total | 108 | 30 | 20 | 8 | 50 | 78 |

TABLE ONE

ently with less gastric disturbance. Laboratory evidence shows good absorption from the small intestine, equal to that from the stomach. This is the first reported use of the enteric coated capsules of Diasone and may provide the answer to one problem, namely, that of eliminating all or at least part of the gastric disturbance.[8]

Except for a few persons receiving 2.0 gm per day, Diasone has not been given in daily doses of over 1.0 gm to 1.33 gm. Pfuetze[9] reports a small group taking up to 5 to 7 gm. but they are also receiving large doses of Brewers' yeast, iron and liver. We have used no adjunct medication as we are still determined to observe what happens with the adminstration of Diasone alone. There are also some opinions that yeast and liver containing the Vitamin $B_1$ (para amino benzoic acid) complex may interfere with the chemistry of the sulfones.

*Observed Evidences of Toxicity:* We have previously described in detail[8] the general toxic effects of Diasone as observed or as reported by the patients. They are briefly: headache, gastric upset, palpitation, malaise, occasional visual disturbances, and "blue" skin. Also noted in some patients was an increase in temperature and an increase in cough and expectoration at onset of treatment.

None of these reactions or toxic manifestations were alarming in severity, none unbearable and none irreversable. Four patients representing 3.7% of the entire series were permanently "taken off" medication because of "intolerance." Their reactions were not as severe as those in some other patients but they just didn't care to "not feel up to par."

*Laboratory Observations:* As shown in animals and previously reported by us, decided changes took place in the Erythrocyte count and Hemoglobin content of the blood. Chart I shows the initial drop in the values of these elements, the observed "recovery" and "leveling off." Severe anemia was not encountered. Depression of the total Leucocyte count did not occur, and neutropenia was not observed.

Evidences of kidney or liver damage were not observed clinically or by histologic study. In this latter connection five persons, in the terminal stages of tuberculosis, were given full therapeutic doses of Diasone for from 12 to 72 days before death. The compound was given, not with any thought of beneficial effect but rather in anticipation of post mortem examination. Autopsies were permitted in four of the five. Our pathologist reported no microscopic changes in liver, spleen, kidneys or adrenals other than those which would be accounted for by the extensive tuberculosis.

*Concentration of Diasone in Blood, Body Fluids, Secretions and Excretions.* With the administration of 1.0 gm. of Diasone daily, blood levels were maintained at well over 1.5 mgm. in 100 cc. of blood (range 1.5 to 2.0). 2.0 mgm. per 100 cc. of blood were shown in some patients of small stature or in the heavier ones who were taking 2.0 gm. by mouth. Blood levels did not, however, increase in any direct proportion to

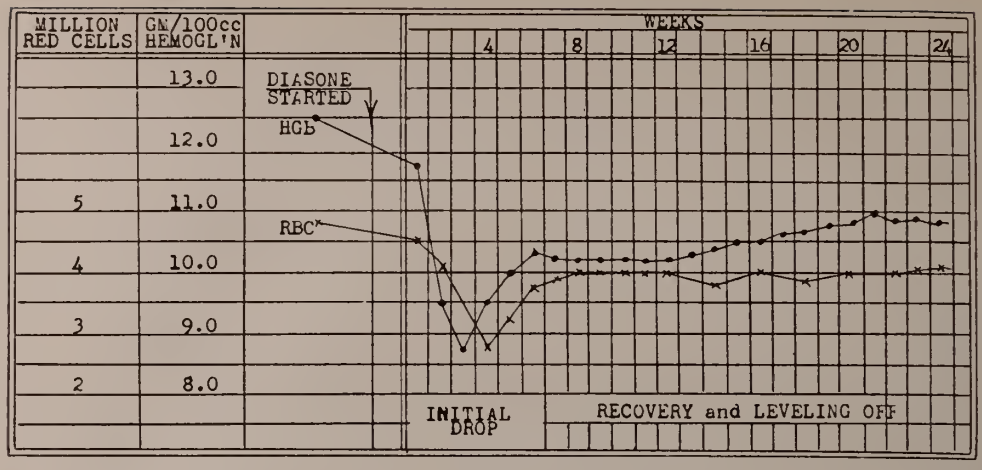



Chart 1

Composite curves showing red cell and hemoglobin response to Diasone therapy.

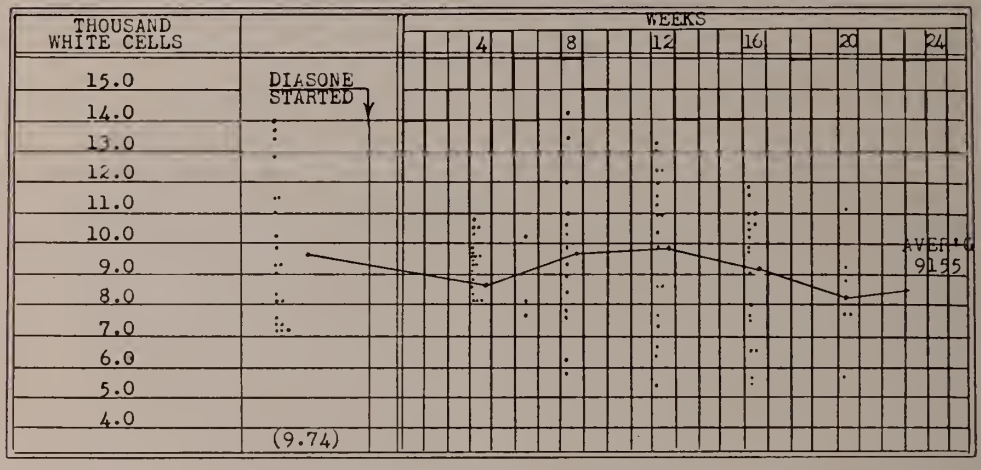



Chart 2

Composite curve showing leucocyte response to administration of Diasone.

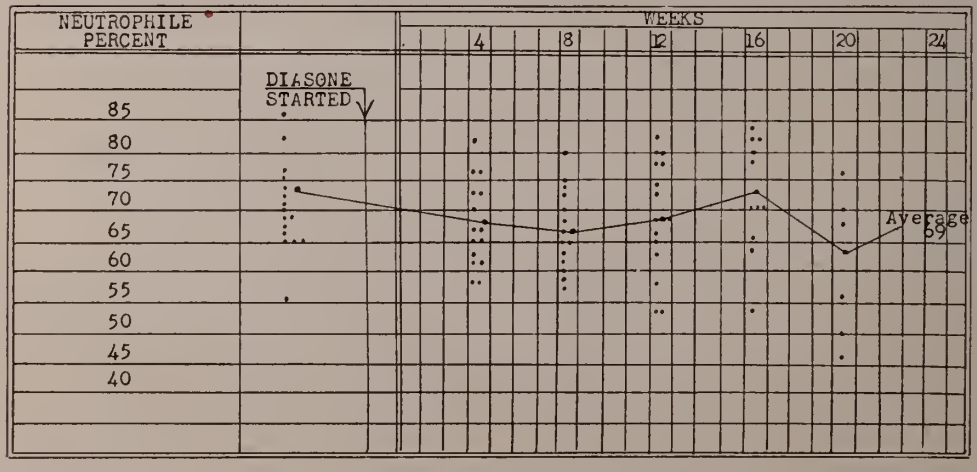



Chart 3

Composite curve showing neutrophile changes (%) with Diasone therapy.

daily intake of Diasone. Consequently we do not feel that doses higher than 2.0 gm. are proportionately more beneficial.

Urinary concentration of Diasone increased with increase in dosage indicating a rather definite renal threshold for this compound. Detailed studies on blood and urine concentration with variable dosage of Diasone are in progress and will constitute a separate report.

In a few patients receiving Diasone orally the concentration of Diasone was determined in the blood, urine, sputum and cerebro-spinal fluid. These findings indicate that the amount of compound going thru the kidneys may possibly be of some value in infections of the urinary tract. Smith has demonstrated that concentrations of Diasone in the magnitude of 5 to 10 mgm. percent, possess tuberculo-static action *in vitro*. Similarly the spinal fluid levels are high enough to suggest application of the compound in meningeal lesions. The determinations of Diasone in Bronchial secretions were suggested by the work of Norris [10] on sulfonamide concentration in bronchiectatic sputum. The values found in the above mentioned fluids in this small group, were:

Blood concentration (range) 1.7 to 2.5 mgm. %
Cereboro spinal fluid (range) 1.5 to 2.0 mgm. %
Urinary concentration (range) 44.0 to 80.0 mgm. %
Bronchial secretion (range) 0.5 to 1.0 mgm. %
(Above determinations are "free' Diasone)

*Therapeutic Observations:* The following observations are termed "Therapeutic" for they are the basic criteria for our impressions regarding the efficacy of Diasone as a therapeutic adjunct in Tuberculosis.

As patients developed a tolerance to the compound, general well-being improved and body weight remained at the pre-treatment level or increased. Cough and expectoration, in the presence of the more acute exudative lesions, increased at first and then gradually subsided. The sputum as a rule became less purlent and less tenacious. Conversion of the sputum from positive to negative (24 hour concentrate)[8] in the various groups is shown in Table II. 62% of those treated 60 to over 120 days became sputum negative. In previously reported observations, over shorter time, 59% of patients treated became sputum negative.

*Changes in the x-ray findings:* Clearing of parenchymal infiltration occurred in 75% of patients and there was also some increase in fibrosis. Some cavities became smaller and some disappeared. The x-ray changes for the most part began to take place at from 30 to 60 days. There were a few patients who showed, at first, a definite *increase* in parenchymal shadows, followed in 2 to 6 weeks by resolution.

Cavity closure, or at least disappearance of cavity outlines, occurred in 37.5% of the 40 patients showing x-ray evidence of cavitation. This is compared with 43% closure reported previously. One patient who had shown complete disappearance of a large annular shadow, previously reported, has now re-opened that cavity. In the moderately advanced group 44% closed, and in the far advanced 33%. 10% more annular shadows disappeared in the treated more than 120 days group than in those treated 90 to 120 days.

The blood changes which we consider favorable are (a) an initial increase in monocytes followed by a later drop with consequent improvement in the lymphocyte-monocyte ratio, (b) a gradual drop in the erythrocyte-sedimentation rate. These observations were made in all persons who made clinical improvement.

SPUTUM CONVERSION — %

| CLASSIFICATION | DAYS of DIASONE ADMINISTRATION | | | |
|---|---|---|---|---|
| | 60-89 | 90-119 | 120+ | 60-120+ |
| Minimal | 100% | 100% | 100% | 100% |
| Mod. Advanced | 40 | 50 | 67 | 52% |
| Far Advanced | 25 | 50 | 27 | 34% |
| Total | 55 | 67 | 65 | 62% |

TABLE TWO

CAVITY CLOSURE or DISAPPEARANCE — %

| CLASSIFICATION | No. of Cavities | Number Closed/Days of Treatment 60-89 da. | 90-119 da. | 120 + da. | Total |
|---|---|---|---|---|---|
| Minimal | None | — | — | — | — |
| Mod. Advanced | 25 | 2 of 5 | 0 of 1 | 9 of 19 | 11 of 25 |
| Far Advanced | 15 | 1 of 4 | | 4 of 11 | 5 of 15 |
| Total | 40 | 33% | 0 | 43% | 37.5% |

TABLE THREE

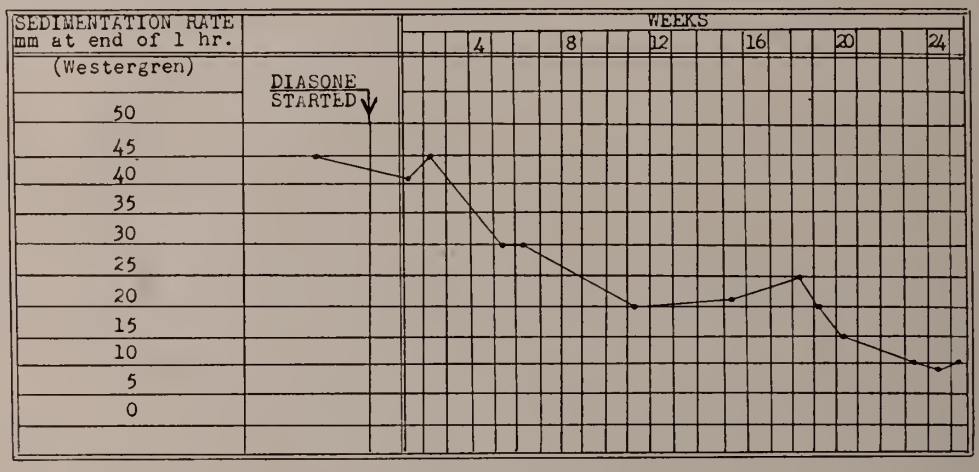



Chart 4

Composite curve showing sedimentation rate trend in 34 patients whose rates dropped during Diasone therapy.

*Therapeutic Resume:* Patients observed over 60 days are included in this analysis. Our first report dealt only with those patients who had received 120 or more days of treatment. Favorable changes in the blood, x-ray and sputum examinations occuring as early as 60 days have continued to be observed. Perhaps the most striking changes took place between 45 and 90 days. Other changes, less pronounced, were seen at 90, 120 and 150 or more days. These changes have taken place in strict bed patients so the bed rest is in all probability a factor. They have also occurred however, in patients who were ambulant and in others who continued to work full time, whercin rest was not a factor. 75% of the patients were permitted one bathroom privilege or more from the start of their Diasone treatment. Collapse therapy has, for the most part been withheld until chemotherapy was given a fair try. Only three patients have had pneumothorax or phrenic nerve interruption *after* Diasone was started.

The group of 44 patients previously reported[8] now show further benefit from the lapse of time or more medication or both. Several persons who made rapid progress during 164 to 275 days of treatment are now "on vacation" for, from 30 to 60 days and continuing to do well.

As shown in Table IV, death occurred in 4% of those treated 60 days or longer; 6% were considered worse and 3% revealed no apparent change. The three deaths were far advanced cases receiving treatment for 64, 73 and 125 days respectively. Five patients classed as worse, (2 M. A., 2 F. A., 1 hip joint) were treated from 64 to 164 days. Those showing no change had very fibrotic lesions with small cavities and apparently have had insufficient treatment (60 days).

"Clinical improvement" was based on observed, measurable data and was classified as follows: (a) = slight improvement (b) = moderate improvement and (c) = marked improvement. "Improvement" was recorded in 100% of minimal cases, 90% of moderately advanced and 76% of the far advanced. All bone lesions except the one hip improved. (80%) Slight, moderate, and marked improvement

CLINICAL COURSE

| CLASSIFICATION | Cases Total | Cases Treated 60-120+ days | Dead | Worse | No. Ch'g | IMPROVED 1+ | 2+ | 3+ | Total "Improved" % |
|---|---|---|---|---|---|---|---|---|---|
| Minimal | 11 | 9 | 0 | 0 | 0 | 1 | 3 | 5 | 100% |
| Mod. Advanced | 57 | 42 | 0 | 2 | 2 | 8 | 16 | 14 | 90% |
| Far Advanced | 30 | 21 | 3 | 2 | 0 | 7 | 6 | 3 | 76% |
| Bone & Joint | 7 | 5 | 0 | 1 | 0 | 0 | 2 | 2 | 80% |
| Genito-Urinary | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 100% |
| Peritoneal | 1 | 0 | | | | | | | — |
| Total | 108 | 78 | 4% | 6% | 3% | 22% | 35% | 30% | 87% |

TABLE FOUR

occurred in 22%, 35% and 30% as shown. (Table IV)

87% of the patients receiving Diasone over periods ranging from 60 to 275 days are considered as definitely improved. Most decided changes for the better occurred in the Minimal and Moderately advanced cases treated for 90 or more days. In our initial report[8] we recorded "improvement" in 93% of all patients treated 120 days or more, 100% of minimals, 100% of moderately advanced and 78% of far advanced cases. Slight, moderate and marked improvement were recorded in 25, 50 and 18% as compared with present figures (above) of 22, 35 and 30%.

The following brief case histories reveal some of the reasons why we are diligently carrying this study further, and demonstrate a great deal more than many paragraphs of discussion.

(Figure 1.)

Case — J.D. No. 592 — White, male, age 36, married copy writer.

1940 — Pneumothorax started on left side; right lung clear.

1942 — *May 11.* X-ray revealed: left pneumothorax with many adhesions and now a fresh lesion in right 1st and 3rd interspaces. Patient complained of malaise, cough, chest pain.

*Oct. 12.* X-ray: left lung re-expanding. Lesion in right lung increased. Continued to work.

*Dec. 11.* X-ray: further increase of disease in right lung.

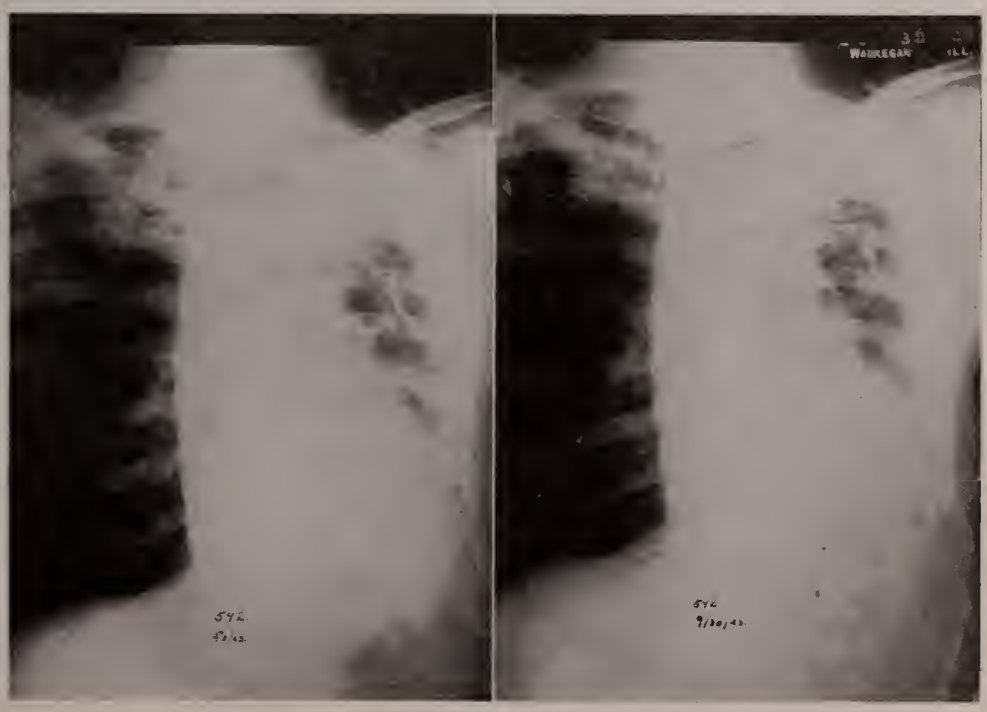


Figure 1.

1943 — *Jan. 25.* X-ray: left pneumothorax practically gone. Further increase of disease, right. Patient felt poorly. Working.

*May 8.* Admitted to Sanatorium. X-ray: Diffuse shadow over left side. Large infiltrate in right upper lobe. Moderately advanced. Patient permitted full bath room privileges and to continue some writing in bed.

*May 9.* DIASONE started: 1 gm. per day. Sputum + (G).

*Aug. 1.* Examinations at 30 days intervals have revealed progressive improvement. No symptoms. Permitted to walk out of doors.

*Sept. 1.* Further general improvement. No cough, no sputum. Gastric washing negative. Discharged to home. To work Sept. 15.

*Nov. 1.* Further gain in weight — now 20 lbs. no symptoms, working full time. DIASONE discontinued on 10-1-43. (176 days).

(Figure 2.)

Case — A.B. No. 594 — White, male, age 37, married, accountant.

1943 — *March.* At army induction center, chest x-ray revealed moderately advanced tuberculosis left apex. Examination by private physician revealed positive sputum; patient told he had advanced tuberculosis and would not live over one year.

*May 5.* Patient had another x-ray film made. X-ray revealed an increase in left apex, with "probable cavitation." Sputum positive.

*May 13.* Admitted to sanatorium. Moderately advanced pulmonary tuberculosis, left upper lobe; cavity; positive sputum. Full bath room privileges. DIASONE started; 1.0 gm. per day by mouth.

*Aug. 3.* Examination in June revealed resolution. Patient left sanatorium and resumed work. Sputum in July and August (24 hour conc.) negative. Submitted x-ray Aug. 3 showing further resolution. Cavity not visualized.

*Nov. 1.* X-ray received in October shows further clearing. Sputum negative in September and October. DIASONE 171 days.

(Figure 3.)

Case — D.B. No. 543 — White, female, age 18, single factory worker.

1943 — *Feb. 3.* Admitted to Sanatorium, acutely ill, temperature 101 to 103. Severe cough, copious expectoration. Sputum positive. Far advanced pulmonary tuberculosis, cavity left upper lobe. Strict bed patient until temperature reached 100.6 degrees (rectal).

*Mar. 11.* X-ray examination shows larger cavity left apex. Sputum positive, abundant. Refused any form of collapse attempt. DIASONE started 1.0 gm. per day by mouth. Bath room privileges.

*Apr. 15.* X-ray reveals some increase of infiltration below cavity. Sputum and cough less.

*May 15.* X-ray: further resolution. Sputum positive. Right lung remains clear.

*Oct. 15.* Monthly examinations reveal contraction in left upper lobe with further resolution. Sputum remains positive. Patient now on half hour exercise. Refuses thoracoplasty. Weight increased 12 lbs. General condition excellent.

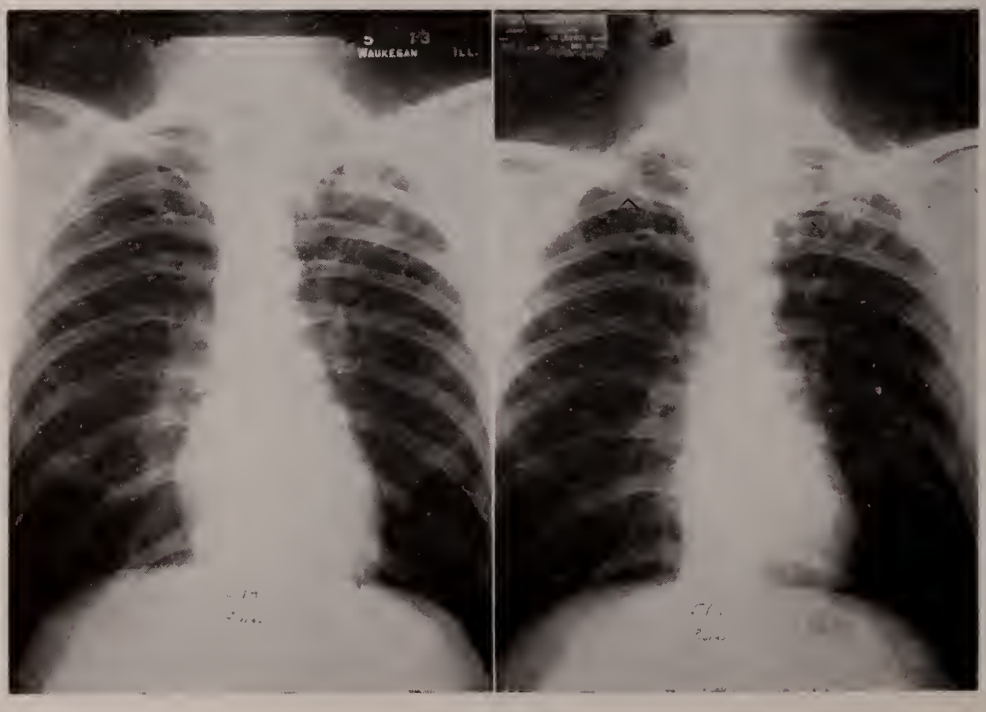



Figure 2.

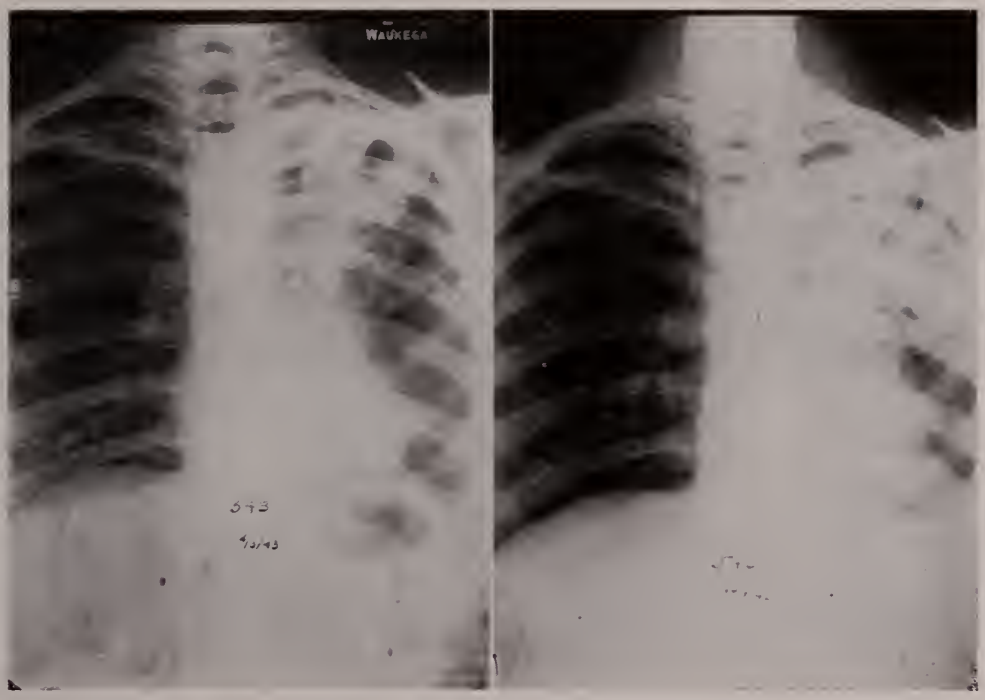


Figure 3.

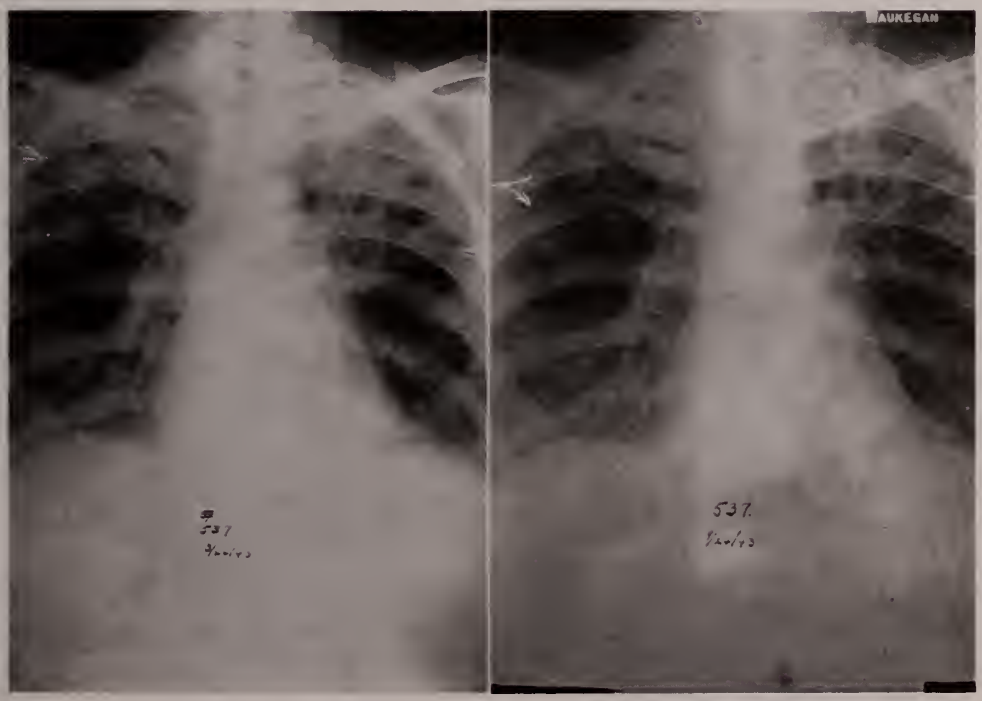


Figure 4.

(Figure 4.)

Case — O.L. No. 537 — White, female, age 37, married, housewife.

1943 — *Jan. 18.* Admitted to Sanatorium, acutely ill. Family physician had made diagnosis of bilateral pneumonia until sputum for typing revealed acid fast organisms. X-ray reveals bilateral parenchymal infiltration, with cavitation right, pleural effusion right.

*Feb. 15.* Increase in infiltration both lungs.

*Feb. 24.* Absorption of fluid on right, now an effusion on left. DIASONE started.

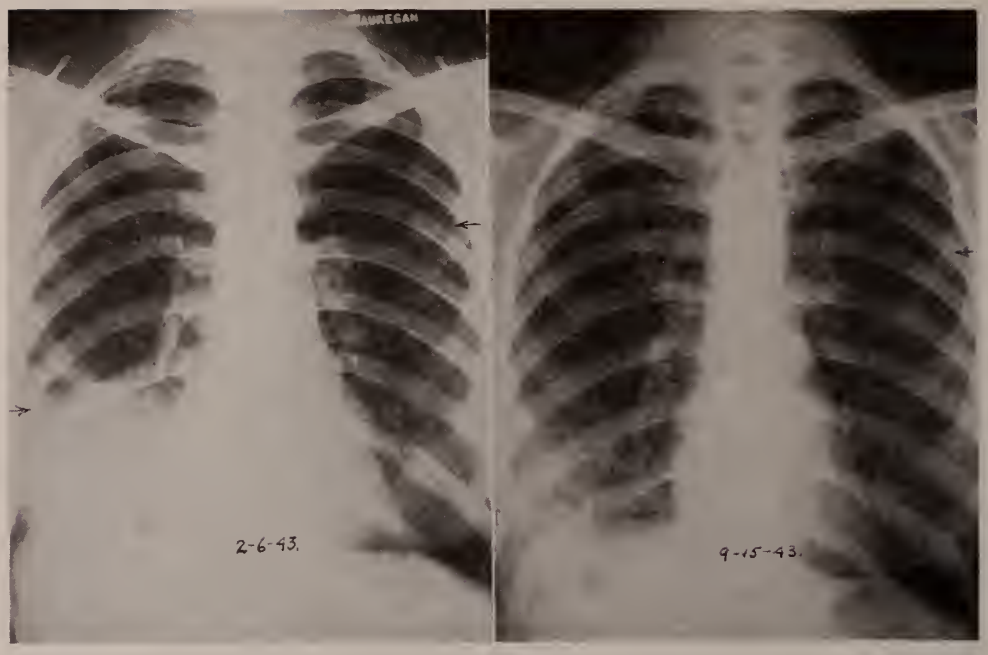



Figure 5.

*Mar. 15.* Temperature dropped from 103 to 100. Given permission to move about room.

*Apr. 15.* Bath room privileges. Resolution in both lungs. Sputum still positive.

*June 15.* Further improvement.

*Sept. 15.* Sputum negative one month. X-ray reveals fibrotic lesions both apices, more on left. Temperature normal. Weight up to normal.

*Nov. 1.* Sputum negative. DIASONE discontinued Three hours exercise — sewing room.

(Figure 5.)

Case — S.S. No. 544 — White, female, age 23, single, factory (shift supervisor).

1943 — *Feb. 6.* Admitted to Sanatorium with extensive basal tuberculosis on right side and soft infiltration in left apex (to 3rd interspace). Sputum positive. Temperature 101-102°F.

*Mar. 5.* X-ray reveals slight improvement on left, but evidence of cavitation, right base. Temperature lower.

*Mar. 11.* DIASONE started.

*Apr. 1.* Temperature normal, given bath room privileges.

*July 1.* Sputum negative. Progressive improvement manifest on monthly examinations.

*Sept. 15.* Discharged to home. Further improvement. DIASONE discontinued.

*Oct. 1.* Resumed employment. Asymptomatic.

*Nov. 1.* No recurrence of symptoms. Sputum negative.

COMMENT

1. The tubercle bacillus is a peculiar, unpredictable organism capable of producing innumerable disease manifestations. Similarly variable are the dose and virulence of the infecting agent, the resistance and response of each individual to such infection and the attitude of the patient toward his disease and treatment. Accordingly, at all times, we are compelled to reckon with these many variables of the "host-invader" complex, no matter what therapy is employed.

2. With the administration of Diasone to our group of patients, favorable changes have been observed in the majority in shorter time and of greater degree than would reasonably be expected on the regime employed without the compound.

3. "Bronchogenic spreads" have not occurred in this series, except in one patient. Some patients who had experienced these spreads prior to Diasone therapy have improved to the point where thoracoplastly is now in order.

4. While the ideal chemotherapeutic agent for tuberculosis has not as yet been found, Diasone is an advance toward that goal. Further clinical investigation of this compound and new derivatives, which our research chemists must provide, should sooner or later dispell the idea that there can be no effective chemical combatant against human tuberculosis.

5. Chemotherapy is not yet an open book — careful, time consuming work in tremendous quantities and of highest quality must be carried out in order to turn each new page.

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## POINTS TO FINDING THAT ASPIRIN MAY CONTRIBUTE TO HEMORRHAGE

### Journal Says Evidence Salicylates May Lower Prothrombin In Blood Reemphasizes Need For Caution In Use Of The Drug

Recent evidence that aspirin or the other salicylates may lower the prothrombin (clotting factor) in the blood and thus contribute to hemorrhages reemphasizes the need for caution in the use of this drug, *The Journal of the American Medical Association* for March 18 advises in an editorial which says:

"Aspirin, or acetylsalicylic acid, has been used in enormous quantities throughout most of the world for some forty-five years. Many persons seem to have a mild idiosyncrasy to this drug or to the other salicylates and consequently avoid its use; the vast majority take it with apparent impunity. . . . Deaths from aspirin have been reported; these appear to have been more frequent in England than in this country.

"New evidence indicates that aspirin and the other salicylates produce a physiologic effect which cannot be ignored. About 1941, C. F. Huebner and K. P. Link of the Wisconsin Agricultural Experimental Station discovered that dicumarol [an anticoagulant obtained from sweet clover] when given by mouth induces a shortage of prothrombin in the blood. They found also that dicumarol could be qualitatively degraded to salicylic acid. Later, Link and his co-workers tested the action of salicylic acid itself. When single doses of salicylic acid were given to rats kept on an artificial diet which was low in vitamin K, a decrease of the prothrombin in the blood occurred. Also if the salicylic acid was given over a long period, hemorrhages resulted; if vitamin K was administered the hypoprothrombinemia [prothrombin deficiency] did not develop. More recently other investigators found that salicylic acid would act in the same way on human beings and that when vitamin K was administered simultaneously with the salicylic acid the fall in prothrombin levels was prevented. The administration of vitamin K after the production of hemorrhage by dicumarol or salicylic acid, however, is of little use.

"These observations offer a plausible explanation of such events as the report of a British physician in 1943 concerning the development of nosebleed in 3 cases after taking large doses of aspirin or the frequent occurrence of bleeding in patients with rheumatic fever who are receiving large doses of salicylates. . . . When . . . hemorrhages occur after the taking of dicumarol or the salicylates, vitamin K is not likely to be effective; then proper treatment may include the giving of a blood transfusion.

"The mass of evidence so far available indicates that aspirin and the salicylates are among the least toxic of active pharmacopeial preparations. This status, however, should not be interpreted as an excuse for failure to recognize hazards connected with their abuse or even under certain circumstances of established usage. Their ability to produce hemorrhage in some cases appears to be counteracted by early administration of vitamin K. It does not now seem necessary to administer vitamin K to all patients receiving salicylates; those who are to receive large doses for a long time may appropriately be given vitamin K."

**IMPORTANT**

**Send changes of address to 30 No. Michigan Ave., Chicago 2, Illinois. Changes received after the 1st of the month cannot go into effect until the following month.**

# Clinicopathologic Conferences

J. J. Moore, M.D., Department Editor.

## TWO CASES OF INFLAMMATORY AND ARTERIOSCLEROTIC HEART DISEASE

An Evaluation of the Disease and Cause of Death.

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Michael Reese Hospital
CHICAGO

It is the purpose of every autopsy, as has often been stated, to explain the disease of the patient and to establish the cause of death. While often a single cause is held responsible for the disease and death, occasionally the autopsy discloses different explanations. Usually in such instances the disease and the ultimate cause of death are found in two different systems of organs. Much more difficult is the evaluation of the disease and the death of a patient if only one organ system of the body is involved by two different lesions, one being responsible for the disease and one for the death of the patient.

To illustrate such an occurrence, I wish to present two instances, in both of which the cause of death escaped clinical recognition while the disease was diagnosed correctly. In the following a short abstract of the pertinent clinical data and a short description of the autopsy findings are presented. This will be followed by an attempt to correlate the clinical and anatomic findings and the implications of these cases.

CASE 1. A 25 year old white female complained of palpitation, muscular pains, fever of 101° for one month. She had been hospitalized on several occasions with the diagnosis of organic heart disease. There was no history of rheumatic fever. Systolic and diastolic murmurs were heard over the apex of the heart. Petechiae were present under the fingernails. There was a slight anemia. The leucocyte count was 18,850. Blood culture disclosed streptococcus viridans. The arterial blood pressure was 118/50. In spite of repeated treatment with Sulfadiazene, the septic course continued. A week before death the patient complained of pain in the left leg and the pulse of the dorsalis pedis was absent at that time. Moist rales developed in the chest and the patient expired. The diagnosis was subacute bacterial endocarditis.

At autopsy, a few petechial hemorrhages were noted in the conjunctivae. The skin of the face was slightly cyanotic. The pleural cavities contained about 500 cc. of a clear liquid and the peritoneal cavity 800 cc. of a similar fluid. The heart was distinctly enlarged, weighing 350 gms. The leaflets of the mitral valve disclosed areas of thickening along the line of closure. The chordae tendineae were thickened and in part fused. A few grayish-white vegetations, measuring up to 2 mm. in diameter, were found superimposed upon the thickened areas. The left and posterior cusps of the aortic valve displayed luxuriant grayish-brown vegetations which measured up to 1.0 cm. in greatest dimension. The vegetations extended to the ventricular surface of the aortic leaf of the mitral valve and were also found on the adjacent mural endocardium of the interventricular septum. Minute ulcerations were present throughout the free margins of the cusps adjacent to the vegetations. The lateral portions of the cusps were adherent to one another. A considerable degree of retraction of the cusps was noted. The mural endocardium just below the cusps showed white areas of thickening and a few white fibrous ridges were present on the endocardium of the interventricular septum, in addition to small pockets consisting of fibrous

tissue, their opening directed towards the aortic valve. The tricuspid and pulmonic valves showed no changes. The myocardium was gray, of boiled appearance, with a few yellowish and white dots distributed irregularly throughout the cut surface. The mouths of the coronary arteries were patent and the coronary arteries showed no gross changes. The liver weighed 1600 gms. and showed distinct evidence of chronic passive hyperemia. Section exposed in the middle of the right lobe, a cyst-like structure which measured about 1.5 cm. in diameter, and contained a reddish-gray (thrombotic) material. This structure communicated with the hepatic artery. The spleen was enlarged, rather firm in consistency, weighed 300 gms., and contained several infarcts. The cut section showed evidence of chronic passive hyperemia in addition to acute hyperplasia with prominent follicles. The kidneys were the seat of a marked cloudy swelling with evidence of passive hyperemia. The remainder of the organs showed no remarkable changes.

Dissection of the left popliteal space revealed a grayish-brown embolus adherent to the wall and completely occluding the lumen of the popliteal artery.

Histologic examination disclosed typical changes in the involved valves. (Figure 1). The myocardium showed a number of changes. There was diffuse cloudy swelling of the muscle fibers with foci of early fatty degeneration. In a number of sections several small and larger infarcts were recognized. (Figure 3). Most of these infarcts were in the stage of organization with a number of newly formed blood vessels and many phagocytic cells, with pigment granules within their cytoplasm. In other sections evidence of myocarditis was found (Figure 4). Polymorphonuclear leucocytes, lymphocytes, and endothelial leucocytes were found, particularly in the interstitial tissue. Other sections disclosed the presence of small emboli in various stages of organization within the smaller branches of the coronary arteries. Often the embolic material resembled the vegetations of the aortic valve and occasionally a small number of giant cells were found surrounding these embolic structures. (Figure 2). There were no Aschoff bodies or

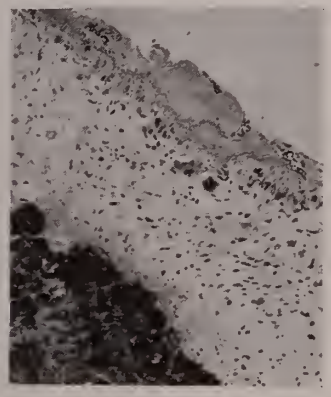


Figure 1.

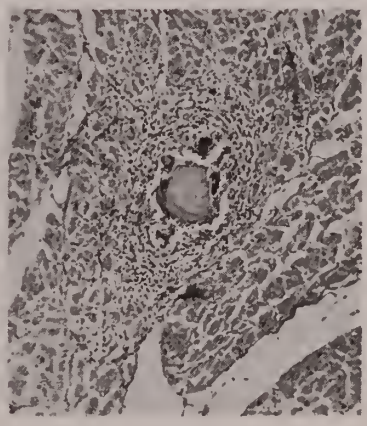


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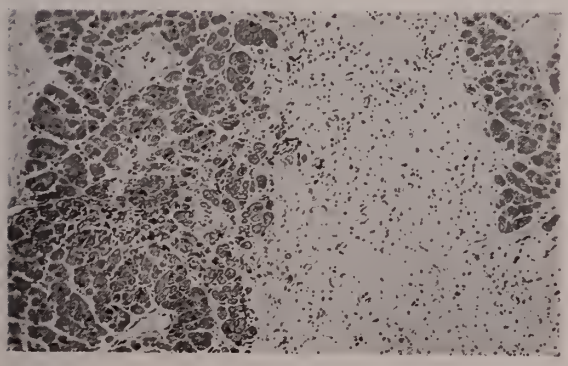


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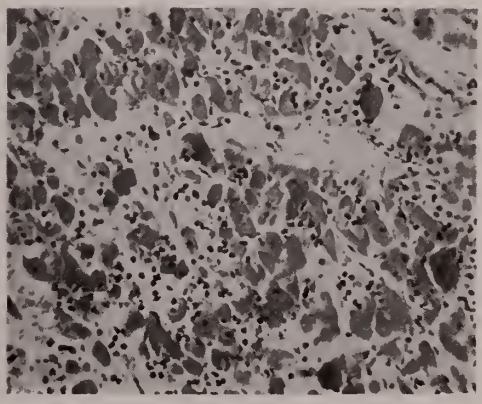


Figure 4.

remnants of Aschoff bodies encountered, nor was any perivascular fibrosis seen.

*Comment*: The clinical diagnosis was subacute bacterial endocarditis, very likely superimposed upon a rheumatic endocarditis, with death resulting from sepsis. Anatomically, the diagnosis of subacute bacterial endocarditis was verified but in addition there were severe changes in the myocardium. Multiple minute infarcts and myocarditis were the most conspicuous findings. Because of the fact that free fluid was found in the various serous cavities, because chronic passive hyperemia was evident in the liver, spleen and kidneys, and because of the anatomically demonstrable severe changes in the myocardium, it seems obvious that the patient did not die as the result of sepsis per se, but rather because of heart failure, brought about by the multiple myocardial infarcts and myocarditis. Section of the cystic area in the liver disclosed this to be a mycotic aneurysm.

In an analysis of a number of cases of subacute bacterial endocarditis, myocardial changes are almost invariably encountered. Careful analysis of the various organs often discloses evidence of passive hyperemia. From the facts presented, it seems important for the clinician to realize that patients with subacute bacterial endocarditis may die as the result of heart failure and for that reason the clinician should be prepared to use therapeutic means to support the heart action even though a failing heart may not be obvious clinically but masked by clinical evidence of sepsis.

It is well known that embolic phenomena occur in instances of subacute bacterial endocarditis. In this patient infarcts were found in the kidney and in the spleen, an embolus was encountered in the left popliteal artery, and minute emboli were demonstrated in small branches of the coronary arteries. The sources of these emboli were the vegetations on the aortic valve. Unusual, though by no means a singular finding, was the mycotic aneurysm of a branch of the hepatic artery. This was the result of infectious material lodging in the intima. producing an acute arteritis with the final production of an embolic mycotic aneurysm.

Clinically, it was thought that the cause of the original endocarditis upon which the subacute bacterial endocarditis (streptococcus viridans) was superimposed, was of rheumatic nature. A careful histologic examination of the myocardium, however, did not disclose any remnants of Aschoff bodies or perivascular areas of fibrosis. While these negative findings do not rule out the presence of an old rheumatic heart disease, there was, on the other hand, no evidence brought forth by the histologic examination that the patient actually had had rheumatic fever. It seems important to realize that it is not rheumatic fever alone which produces an endocarditis which later may form the anatomic basis for subacute bacterial endocarditis, but it must be realized that any acute infectious disease may produce an endocarditis upon which eventually a subacute bacterial type of endocarditis may be superimposed in case of streptococcus viridans infection. It is interesting in that respect that there was no history of polyarthritis or rheumatic fever. However, the patient might have had an upper respiratory infection; an acute infectious disease; pneumonia, etc. — all of which diseases may occasionally cause an endocarditis. There are rare cases on record where a syphilitic disease of the aortic valve constituted the primary abnormality in the valve upon which a subacute bacterial endocarditis may be superimposed. There was no evidence of syphilis in this patient, and there was no evidence of a congenital heart anomaly.

In summary, then, a patient whose disease was diagnosed clinically as subacute bacterial endocarditis, whose death was considered to be the result of sepsis, at the autopsy was shown to have subacute bacterial endocarditis superimposed upon a non-specific endocarditis of the aortic valve. There was no evidence of old rheumatic carditis. Multiple infarcts were present in the myocardium, spleen, kidneys, an embolus in the popliteal artery, and a mycotic aneurysm in a branch of the hepatic artery. Also encountered was a diffuse myocarditis. From the evidence presented, it seems that the patient died, not as a result of sepsis, but as a result of heart failure.

CASE 2. This patient, a 66 year old white male, complained of dull abdominal pain and back pain, vomiting and constipation with cramp-like pain the right lower quadrant. There was a history of coronary thrombosis six years ago. Since that time anginal attacks occurred at irregular intervals. There was a thrombosis of the femoral artery with amputation of the right leg nine months before his death. A partial

prostatectomy had been performed 13 years ago. Physical examination revealed regular heart rhythm, rate 78, and arterial blood pressure of 110/74. The heart was enlarged to the left. There was a moderate spasm of the abdominal muscles and tenderness over the right side. 24 hours after admission, severe pain in the region of the right hip occurred, followed by collapse. Arterial blood pressure at this time was zero. In spite of heroic measures, the patient expired one-half hour later. The death of this patient was thought to be due to pulmonary embolus, coronary thrombosis, or abdominal hemorrhage.

At autopsy this rather muscular, white male, appearing about 70 years of age, had had an amputation of the right leg at the midportion of the thigh. The resulting scar showed no changes. There was a healed surgical incision just above the symphysis pubis. This had been done for a partial prostatectomy. When the abdomen was opened, it was found that the entire right retroperitoneal area bulged markedly and that the parietal peritoneum appeared of a bluish-black color. When incised, a very large amount of partially liquid and partially clotted blood was found in the retroperitoneal region, completely encasing the descending aorta and the right kidney and right suprerenal. The clotted blood was also found extending along both common iliac arteries. The heart was enlarged, weighing 450 gms. There was an old aneurysm in the apical portion of the left ventricle, extending to the adjacent interventricular septum. It measured about 4 cm. in greatest dimension. The coronary arteries showed a severe degree of arteriosclerosis with complete occlusion of the anterior descending branch of the left coronary artery. A number of severely narrowed portions were found in the other coronary branches. No recent thrombus was present. The aorta was the seat of a severe arteriosclerosis with many areas of hyalinization, calcification, and atheromatous ulcers. About 2 cm. proximal to the bifurcation into the common iliac arteries there was a large saccular aneurysm which was filled with lamellated thrombi. (Figure 5). There was a direct communication between this aneurysm and the retroperitoneal space, a probe inserted into the aneurysm leading into the huge hemorrhagic region described above. Two similar, though smaller aneurysms were found in the uppermost portions of both common iliac arteries and two smaller ones in both internal iliac arteries. The remainder of the organs showed no significant changes. The prostate was present, though a portion of the median lobe had been removed. Grossly, no changes were found in the residual prostate.



Figure 5.

On microscopic examination the arteriosclerotic nature of the lesions in the aorta were quite characteristic. Large atheromatous cavities were present adjacent to the aneurysms (Figure 6) and in the region of the aneurysm the elastic lamellae of the media could not be recognized. There was no histologic evidence of syphilis. Though grossly the prostate showed no significant changes, in one area a new formation of minute glandular structures was encountered.



Figure 6.

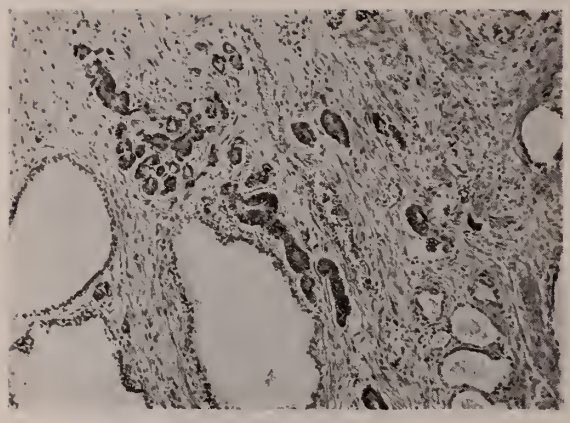


Figure 7.

These were lined by one or two layers of cuboidal cells, which showed marked anaplasia, many atypical mitotic figures, and invaded prostatic structures (Figure 7). These changes were characteristic of an early adenocarcinoma.

The principal disease in this patient was the generalized arteriosclerosis with coronary sclerosis and resulting myocardial infarction. He was diagnosed clinically as suffering from angina pectoris. The generalized arteriosclerosis had also produced an occlusion of the femoral artery, which had resulted in a gangrene of the leg and had necessitated amputation some time ago. Still the arteriosclerotic process progressed and eventually the patient developed a severe atheromatosis in the descending abdominal aorta with eventual formation of atheromatous ulcers and production of an aneurysm. This had ruptured and caused the death of the patient. It is apparent that a moderate hemorrhage, occurring 24 hours before his death, brought the patient to the hospital. The final hemorrhage ensued one-half hour before the patient died. No evidence of syphilis was found at the autopsy.

Thus, again there was only one major disease present which clinically had manifested itself by involvement of one set of vessels, the coronary arteries. Death resulted from the involvement of another part of the vascular system, namely, the distal portion of the abdominal aorta. This was the seat of an arteriosclerotic aneurysm which having ruptured, culminated in the fatal hemorrhage. Only the coronary arteriosclerosis and resulting attacks of angina pectoris were recognized clinically.

The presence of the early carcinoma of the prostate was of no importance as far as the patient was concerned. It was a small tumor, not producing clinical symptoms at the time of the patient's death. However, such an early carcinoma may assume a very significant role in the evaluation of the hereditary component should an offspring of the patient develop a tumor.

## SUMMARY

In summary, it is stressed that a patient with subacute bacterial endocarditis may die, not as a result of the infection in general, but because of myocardial failure brought about by a myocarditis and minute myocardial infarcts, the result of emboli arising from the vegetations.

A patient who has generalized arteriosclerosis and attacks of angina pectoris and suddenly expires does not necessarily succumb because of the coronary sclerosis or thrombosis or resulting myocardial changes, but may die suddenly because of an entirely different manifestation of the arteriosclerotic process.

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It is fully realized that it is essential for our future to win this war, and the finding of a case of tuberculosis, with the prevention of its further spread, is as definite an act toward winning the war as the destruction of an enemy plane or tank. This is especially true of our industrially employed. A case of tuberculosis in a worker not only removes an important element in production but also necessitates the dissipation of the energies of many others to restore him to health. These people can and should be engaged in the more fruitful work of winning this war. The physicians, nurses, social workers, educators, attendants, dietitians, and all others directly or indirectly related to the care of a tuberculosis case will find that they have only a minimal amount of time to care for tuberculosis. Although by case finding their load will be greater, the removal of an open case from industry will in the long run prevent the increased rise in tuberculosis morbidity and mortality which we greatly fear. The industrial case, therefore, is more important than just any case of tuberculosis.

When industry and the worker realize the terrible cost in manpower and human suffering that tuberculosis entails and that a method of control is feasible, then case finding in industry will be more eagerly accepted and may, in fact, be one of the outstanding contributions toward public health that will survive this war.—Irving R. Tabershaw, M.D., Industrial Medicine, March, 1943.

# Industrial Health

Committee On Industrial Health — Frederick W. Slobe, Chm., 2024 South Western Ave., Chicago, Frank P. Hammond, H. A. Vonachen, R. I. Barickman, C. O. Sappington, Milton H. Kronenberg.

## HEALTH ON THE PRODUCTION FRONT*

*It is very gratifying to note the interest taken by the National Association of Manufacturers in promulgating better health in industry. Several timely publications have been issued by this Association including one entitled "Health on the Production Front." This pamphlet was written under the supervision of Dr. Victor G. Heiser, Medical Consultant of the National Association of Manufacturers, and was issued in January 1944.*

### The Modern Practice of Industrial Medicine
### PREVENTIVE MEASURES

There was a time, not so long ago, when industrial medicine was more or less confined to in-the-plant emergency treatment and to the diagnosis and treatment of occupational disease. Recently, along with medical science in general, industrial physicians have come more and more to appreciate the value of practicing *preventive* medicine. Apart from humanitarian considerations, industry has found that it is cheaper — vastly cheaper — to prevent an accident or an illness than to pay for reparative treatment.

In time of war this value cannot be measured in terms of dollars and cents. It must be measured in terms of time and lives saved and of victory itself.

The general acceptance of the fact that industrial preventive medicine is "good business" was in the nature of a major decision not only for industrial medicine but, indeed, for all related fields of the public health. For that matter, the battle is still not won. In some areas there is still more emphasis upon the treatment of ills — in so-called finger wrapping — than upon their prevention.

The necessity for widespread treatment of illnesses should be regarded as a "moral defeat" by the modern industrial physician. The first and foremost responsibility of the industrial physician is to *prevent* physical disabilities which might arise as a result of employment.

Among the preventive tools at the disposal of the industrial physician today are medical examinations, immunization, dental care, control of communicable and occupational diseases, health education, nutrition, mental hygiene, good sanitation, safety equipment, adequate heating, lighting, and ventilation.

### Physical Examinations

Physical examinations should be given before employment; during employment according to the age, physical condition, or type of job; after absence from work; and when the worker leaves the employ of the company. Such examinations protect not only the worker but the company. Management would not consider using material for production which had not been submitted to strict and frequent tests. It should not employ men or women whose physical limitations are not known.

*Pre-employment or entrance examinations:* The primary purposes of this examination are to see that the worker is actually fit to work and to determine what job will best suit his physical capabilities and condition. This is obviously for his own good and that of his family and working associates, as well as for the good of the company itself. It is an unjust charge that industry has used the pre-employment examination to weed out men not wanted for reasons other than physical condition. The less than 5 per cent rejected are rejected on the basis of medical fact, and greatly to their own good. When an applicant is discovered to be physically unfit for the work for which he applied or which is available, he is told either to wait until a suitable job opens up to or to seek employment elsewhere in a job which will not imperil his health. No thinking worker can object to the pre-employment physical examination when he realizes its purpose.

Physical standards must, in many cases, be lowered today in the present shortage of manpower. Therefore, special care should be taken by the examining physician to avoid placing a worker who has, let us say, heart disease in a job which may cause further damage to his heart such as operation of a crane, where an attack might also endanger the lives of others or the safety of valuable machinery. But, where such considerations are not involved and the person simply

*Bulletin, National Association of Manufacturers, Jan. 22, 1944.

sits at a bench, the examiner can afford to be more lenient.

*Examination during employment:* As workers get older they should be examined more often to see if their original health is being maintained. Whereas a younger worker needs a thorough going over once in, say, five years, a man or woman employee past middle age should be examined every three years, and past sixty, every year.

Workers engaged in the more hazardous occupations of wartime, such as handling TNT and DNT, tetryl, ammonium picrate, benzene, and various leads, should be examined once a month. Each physician must be on the lookout for possible contamination in his plant from such causative agents as gases, vapors, and fumes, toxic metals or alloys, dusts, lubricants (especially cutting oils), radium, etc. Special care must be taken to ascertain the properties of new materials and processes, and those which, while not new to industry at large, may be new to a particular plant.

Workers upon whose activities the safety of other workers depend should be examined often, probably semiannually. Such a category would include all drivers of vehicles, cranes, trains, and guards and other key workers.

The employee whose health was doubtful in one or more respects at the time of his employment should be examined as often as necessary to protect him from aggravating his condition and from endangering the health or safety of fellow employees, and to avoid a claim for disability in the form of compensation benefits.

Workers returning from absence from the plant because of illness should be inspected to avoid spread of infectious diseases and to protect the absentee from overstrain by returning to work too soon after illness.

Request examinations should be performed whenever possible if the cause for examination appears to have a legitimate bearing upon occupation, and as long as such examination does not conflict with service that the worker's own private physician would ordinarily perform. Even here, because of the shortage of private physicians in many communities and the possible difficulty of the worker in obtaining medical help outside the plant, the industrial physician should think twice before rejecting such requests.

All persons handling food served to the workers, or connected with the distribution of such food, should be given special examinations at least as often as required by the laws of the state in which the plant is located. Some persons can be "carriers" of disease, like typhoid fever, without evidencing symptoms of the disease themselves.

Workers being transferred from one job to another should be examined, as at entrance, for proper replacement in the new job.

Examinations on exit or termination of employment are generally considered desirable, especially where the worker has been engaged in a hazardous occupation. This assists in case a claim for benefits is later raised and is good "public relations" if the worker knows he leaves in good health.

The periodic physical examination of the plant executives and clerical workers must not be overlooked. Too often their health and well-being is left entirely up to them, with the result that top executives often work themselves to the point of a nervous or physical breakdown. All the aspects of industrial preventive medicine should be placed tactfully at their disposal by the industrial physician if the health of the plant personnel — both management and labor — is to be properly maintained.

### Immunization

Left in their own usual locality, people seem to develop a certain amount of natural immunity to the types of infections in that vicinity. But bring in strangers, with infections new to the new locality, and an epidemic may develop. Also, move people from their own community to others where different infections are present, and they often develop them.

Usually this is a problem for the public health authorities only. But in wartime it becomes a problem for the industrial physician as well. The National Resources Planning Board estimates that, by the end of 1943, as many as 30,000,000 persons in this country will have undergone an economic dislocation. The chance of epidemic outbreaks in crowded industrial areas is considerable. New people are coming in with infections to which they have become more or less immune by continuous exposure but to which the present inhabitants are not immune, and vice versa.

The industrial physician may find his efforts to combat disease within the plant largely negated if nothing is done about this outside source of contamination. He has an excellent chance to do something about this situation at the time of employment. The industrial physician should be no less careful with new workers than the Army and Navy are with newly-inducted recruits. In cooperation with the local health officials he should see that all applicants for employment who have not been vaccinated against smallpox during the past year are immunized and take any other steps necessary.

If not all the milk in the area is properly pasteurized, workers should be immunized against typhoid and paratyphoid fevers; also unless all possible sources of drinking water available to the populace are protected and constantly checked by the local health authorities. Physicians should insist that no milk enter the plant unless it has been properly pasteurized.

Prophylactic immunization against the common cold has been tried but not yet proved efficacious on a large enough scientific scale to be generally recommended by most authorities. There is, however, hope of future success, and progress is being made that may change the whole picture.

### Dental Prophylaxis

Physical defects of dental origin are sometimes the cause of ill health, and their elimination by a continuous program of prophylactic care is well worth the individual's and the plant's time and requires relatively small expenditure.

The industrial dentist must have a thorough knowledge of the occupational hazards that may cause de-

terioration of the teeth, as well as be prepared to treat such cases if all attempts at prevention should be unavailing.

Large plants have found it economical to employ one or more full-time dentists, with dental hygienists to do the cleaning or prophylaxis work. Smaller plants will find that dental service pays too, and they can achieve it by retaining a dentist, in cooperation with other small plants nearby, who will either go to each plant for treatment of workers or take them into his own office on a regular schedule. There are many ways this can be worked out locally.

### Control of Respiratory Diseases

Probably more than one half of the sick absenteeism and more than one third of the workdays lost by industrial workers through disability may be attributed to diseases of the respiratory organs, such as colds, influenza, pneumonia, and tuberculosis.

The wartime causes of this state of affairs are many: overcrowding; exposure of people to strange pathogens which have been introduced by persons from distant areas and to which they have developed no natural immunity; malnutrition; various allergies; and simple exposure to unaccustomed weather and atmospheric environment.

Apparently the best way to avoid catching a cold or other respiratory disease is to isolate oneself from all other people. As indicated in the section above on immunization, the efficiency of cold vaccines for any appreciable length of time is highly debatable. The same is true of influenza and pneumonia prophylaxis.

The incidence of colds in individuals can probably best be kept down by common hygienic methods in the home, in public conveyances, in public places, and at work. Rooms should be kept aired out, and as much sunlight should be admitted as possible. Exposure to air and sunlight kills harmful bacteria and viruses. Some plants make "sun-lamp" baths available ot workers to build up their general resistance to infection.

Workers should be educated to isolate themselves as much as possible during the beginning or "runny" stages of a cold and even to wear a nonporous mask at work. It is known that bacteria are spread by sneezing, coughing, and talking.

For their own protection and the protection of others, all workers should have an X-ray taken of their chests at time of employment to determine whether they may have tuberculosis. Periodic re-examination by X-ray is indicated.

### Control of Venereal Diseases

According to the U. S. Public Health Service, syphilis is the "most prevalent of the major communicable diseases" in the United States.

Of a million selectees and volunteers for the armed services between the ages of 21 and 35 it was found that 60,000 had a veneral disease ("VD"). The prevalence rate for syphilis was 45.2 per thousand and 11.5 per thousand for gonorrhea. Using this as a basis, it has been estimated that there are 3,200,000 persons in this country who are infected with syphilis, a ratio of one infected person to every forty-two of the population.

Since about 75 per cent of all syphilitic infections are acquired by persons between the ages of fifteen and thirty-five, and since many of this age range are being called upon to leave industry for the armed forces to be replaced by older persons, the tendency has been to overrate the "VD" problem in wartime industry. However, the problem is still large and needs attention. A definite program for veneral disease control within the plant will be found to lessen work interruptions, absenteeism, and labor turnover, to increase production, and lower compensation costs. It may also be expected to help rehabilitate a large group of employees who would otherwise be unemployed or who would perhaps work where no control was exercised, thus risking the danger of infecting others.

Syphilitic workers can remain at work with safety to themselves and others under an organized program today. State and national public health offices are in a position to offer complete programs for VD control in industry today, and their advice should be sought.

### Records

The keeping of complete medical and dental records has been found to be an essential part of the medical program. From the preventive angle, adequate reports when analyzed reveal to the industrial physician where the weak spots are in his entire program and lead him directly to an answer to the question, "where, when, why, and how does occupational sickness contribute to lost time in the plant?"

Records save time and insure accuracy of diagnosis in the treatment of patients who have received treatment before, and they are invaluable evidence in compensation cases.

### Inspection

The industrial physician should make frequent trips through the plant to inspect all operations for possible health hazards. It is often advantageous to make these circuits in company with the hygiene and safety engineers. In this way the problems of each are made clearer to the others. It is well to vary the usual departmental meetings with inspection trips through the plant to secure first-hand knowledge. Also, this provides an opportunity to know some of the employees and to give them an on-the-scene-of-action glimpse of those in charge of their health and safety.

### Health Education

One of the precepts of the American way of life is voluntaryism as long as it does not interfere with the rights and privileges of others. Voluntaryism has its limits, however, in the field of health.

It is the responsibility of the industrial physician to advise the worker where his personal privileges of circulating in public begin and end when he is ill; for example, in reporting for work with a bad cold, without first being examined, treated, and advised by the medical department.

Beyond this broad, workaday principle, there are several subjects which should be emphasized in every health-education program.

1. Occupational hazards in the plant. Workers

must understand the possible dangers involved in their work or they will have neither the knowledge nor proper mental attitude toward guarding against them.

2. Nonoccupational causes of disability and ways of preventing disease and speeding recovery.

3. Helpful personal practices, such as relaxation, sleep, posture, recreation, and cleanliness.

4. Nutrition as a means to better health, including choice of foods, family budgeting, lunch box and home meal planning.

5. Medical care for the individual and the family, not only in sickness but *especially* in health, when a definite program for prevention of sickness (including immunization against diseases, dental prophylaxis, periodic medical examinations of all the family, etc.) should be outlined by the family physician and followed by the family.

Edward G. Bernays describes the problem of health education thus: "Health gives no sensory perception, sickness usually does. Many people think health is an effortless state we are entitled to, not something difficult to be won by care and work. . . . Basically, the problem of health education is bringing people to a sense of reality, having them make sacrifices and preparation today for tomorrow."

The method of carrying out an over-all health program includes several different approaches. Every physical examination and every interview with a plant doctor, dentist, or nurse should be used for wise, friendly, and "low pressure" health salesmanship. The nurse can be especially helpful in finding opportunities for health education, particularly among women employees.

Many plants have had success in furthering their health education programs by organizing and cooperating with a plant health committee composed of representatives of the workers and of management. Some plants go so far — and successfully — by having a committee composed entirely of workers carry out the health and safety education programs under the medical direction. The membership of this committee should be chosen entirely by the employees themselves.

The director of the health and safety education program should coordinate them with the programs of the local public health and accident prevention authorities. This procedure not only makes for greater over-all efficiency but avoids duplication or the possibility of the two groups offering different advice on the same subject, which tends to confuse the individual and to lessen the authority and effectiveness of the message.

Health education materials include posters, articles in plant publications, motion pictures (many good ones are available from the OWI, insurance companies, public health authorities, various health associations, etc.), and pamphlets which can be given out at mass meetings or mailed home.

All literature should be quick to read, easy to understand, really informative, attractive, and even entertaining (illustration and color help). Donald Duck or Mickey Mouse on a poster probably does a better job than a white-coated "doctor" complete with stethoscope and pince-nez. Pamphlets for distribution to workers should be short and small (pocket or pocketbook size). Some workers have been found to resent health and other "advisory" material in their pay envelopes.

### Nutrition

In the past few years, and especially since the United States became an active belligerent, American industry has been discovering the importance of improving the nutrition of the average worker if he is to stay on the job in fighting trim.

From previous authoritative surveys it must be recognized that probably fewer than one-third of our war-production workers have adequate diets. Because of local difficulties in securing certain foods in sufficient quantities from time to time, like meat and butter, and because shopping for food has become a problem to women war workers, the situation may actually be worse today than even the prewar tests indicate.

Malnourishment among war workers may bring about sickness absenteeism, cause accidents, contribute greatly to on-the-job inefficiency, work spoilage, and slower production rates. Since the effects of malnutrition are known to be so destructive to war production schedules, it may be said conversely that the effects of good nutrition among a plant's workers will show amazing results.

Management in many cases in the past has felt that what the worker eats is his own affair. If he has coffee and doughnuts and nothing else every morning for breakfast, and generally neglects eating a balanced diet the rest of the day, his efficiency will eventually be reduced. *In better nutrition for the war worker lies one of the greatest hopes for less absenteeism, greater efficiency, and more production.*

Management is in a strategic position to be of great help to the worker in nutrition education of both the direct and indirect type. Generally speaking, there are five lines of attack:

1. Education of the worker as to what constitutes an adequate diet and as to the dividends to be collected in terms of personal health and national security by sticking to it.

2. Education of his family — wife or mother — as to planning and preparing three nutritious meals a day, including an adequate lunch to be carried to work.

3. Provision of nutritious foods at the plant — in the cafeteria, at lunch counters, on rolling kitchens, and on the between-meals, supplementary "snack bars."

4. Cooperation with local restaurant owners to provide nutritious foods under sanitary conditions for workers near the plant and in their home communities.

5. Making these nutritious foods available at low cost at the plant and in local restaurants, and education of the worker to spend enough of his money on food to receive an adequate diet at all times.

Rationing and the difficulty experienced by women workers who still run their homes in finding time to shop after working hours — and the even more important factor of the increasing provision by management of inexpensive, nutritious foods at the plant

— have tended to make the "great American lunch box" less popular among war workers. Many thousands still do bring their own lunch, or part of it, however. These people need to know the fundamentals of good nutrition in planning packed lunches. They should, for instance, know the "five fundamental foods" recommended as the basis of an adequate diet. These are, briefly: (1) milk, (2) eggs, cheese, fish, or meat, (3) fresh vegetables, (4) fresh fruit, and (5) bread or cereal.

A nutritionist, or dietition, attached to the medical department, is practically indispensable in making up plant cafeteria menus and in supervising their preparation, under sanitary conditions, in such a way as to make them most appetizing and retain the greatest food value. She also is available to workers for nutrition advice when requested, and to advise workers found by examination to be suffering some nutrition deficiency or excess. She can supervise the nutrition education program in all its aspects under the direction of the industrial physician.

Proper methods of cooking food and keeping it hot are essential to retaining natural nutritive values. Some of the most nutritious foods, for instance, lose the greater part of their food value when cooked too slowly or when allowed to remain on a cafeteria steam table too long. Some cafeteria rules and the experience of industry in the setting up and maintenance of plant eating facilities such as cafeterias, rolling kitchens, lunch counters, and snack bars, are discussed in the N.A.M. booklet *Food, Work, and War* (1943). Supplementary or between-meals feeding is endorsed in that study as increasing the efficiency, morale, and general well-being of the workers and, as a guide, a table showing important food sources and the functions of vitamins and minerals is included in a discussion of vitamin concentrates.

In general, experience so far does not indicate that vitamin "pills" or concentrates should be fed indiscriminately to workers. The plant physician should determine the existence of vitamin deficiencies on an individual basis and as a result of investigation of individual food habits before prescribing vitamin concentrates. (There is now a "Vitascope" with which it is a relatively simple matter to determine for even large groups of workers whether vitamin and mineral deficiencies exist.) At present industrial medicine believes that a man who is well fed according to high standards of good nutrition does not need any vitamin pills. On the other hand, there are cases where employees engaged in certain kinds of work, such as work with chemicals, have benefited from the use of indicated concentrates.

Small plants without benefit of cafeteria or lunch counter service can still do much in the way of nutrition education and in the provision of nutritious foods for their employees. In almost every industrial neighborhood there is an existing industrial catering service; if not, a local nonindustrial caterer might, without too much difficulty, be persuaded that it is his wartime duty to supply the employees of local war production plants with nutritious mid-shift meals at as near cost as possible. Many companies are subsidizing such a service in order to provide the caterer with incentive to provide the best food available at a reasonable profit, besides assuring a nutritious, low-cost meal for the worker. A simple way to provide food is the use of a roving "snack bar," brought to the worker at his work and supplied with nutritious, energy-giving food.

Another plan is for two or more small plants to get together on a cafeteria either in one of the plants, in a suitable and convenient unoccupied building, or in a new structure located conveniently for all participating plants.

The government will advise and assist plants desiring to provide suitable eating facilities for their workers in matters of priorities, equipment, location, educational material, and in other ways.

Nutrition and nutrition education have assumed their rightful place in the industrial health program. Management has found that, in terms of reduced absenteeism, accidents, fatigue, and sickness — and in increased efficiency, morale, and *production* — it pays to promote good nutrition among wartime industrial workers and their families.

### Mental Hygiene

Too often in defining industrial medicine, or medicine in general for that matter, the health of the individual's mind is forgotten in the more obvious pursuit of his physical well-being. Actually, a person can be sick in mind as well as in body, and with similar effect upon the quality and quantity of his work.

It has been said that every industrial physician should strive toward the ideal that each physician should be his own psychiatrist. The story has it that a patient approached a physician at his office and ultimately confided that he suffered from a plague of green grasshoppers which (couldn't the doctor see for himself?) were all over his suit. The doctor, of course, could *not* see any grasshoppers on his patient's suit and referred him down the hall to a psychiatrist. Having heard the patient's complaint, the psychiatrist, however, immediately jumped up from his chair behind the desk and said, "Don't get those things on me!" The patient and the psychiatrist understood each other perfectly and the basis for cooperation had been laid.

In the milder cases, the industrial physician can help the mentally ill by adopting the understanding, "get-those-things-off-me" attitude. In other words, he can be his own psychiatrist if necessary — at least for the duration.

Mental sickness among industrial workers can be the cause of absence from work, accidents on the job, of friction and labor trouble, of defective production, and general inefficiency and ineptness. The industrial physician must know something of the causes of mental instability likely to be found among workers. It is a function of preventive medicine made increasingly important because we are at war.

The problem is intensified today by the fact that many war workers are not only new to their jobs, but new to industrial work entirely and are mentally as well as physically unadjusted to it; that war creates

a greater emotional tension in some individuals than in others; and that many people now accepted for industrial war work would ordinarily be advised to seek employment in other fields.

Peacetime experience, to which must be added the wartime experience now being accumulated, has shown that the following classifications include the great majority of psychiatric problems likely to be encountered by the industrial physician:

1. True psychotics: rare instances and eliminated at once from the industrial scene.
2. Subnormal mentalities: not numerous and once adjusted to proper work not troublesome.
3. Psychopathic or borderline personalities: difficult to adjust and once having reached positions of authority hard to detect and very dangerous to morale and efficiency.
4. Neuropsychiatric conditions: alcoholics, syphilitics, epileptics, postencephalitics, preseniles, and so on.
5. Psychoneurotics: more numerous but chiefly of the anxiety states susceptible to treatment.
6. Industrially maladjusted: the largest and most important group with the following subclassifications:
   (a) Personality clashes and habitual rule in fraction.
   (b) Accident-proneness and habitual absenteeism.
   (c) Age crises of menopause and gerontology.
   (d) Development crises of endings, beginnings, lack of promotion, and the 30-year social hurdle.
   (e) Rehabilitation cases of convalescent workers and especially of neurosis following accidental injury.
   (f) Malign environmental factors of anxiety and malnutrition.
   (g) Overstressed and emotional compensations for physical defects and dysfunctions.

In wartime, hours taken out of the work week to talk to maladjusted employees may at first glance seem avoidable, but wartime experience has shown that such time is well spent. Sometimes the physician can train an assistant to help him, and often an intelligent, understanding nurse can be of great value in talking over the problems of women workers and smoothing out maladjustments.

It should be pointed out that persons found at the time of pre-employment examination definitely to fall into the most serious of the categories listed above should be either rejected or placed in jobs where they will not endanger themselves or other workers, and where a supervised program of mental therapy can be carried out as part of the company's rehabilitation program.

## MILLION SOLDIERS MADE DENTALLY FIT BY ARMY DENTAL CORPS

Approximately 1,000,000 men have been rendered dentally fit by the Army Dental Corps for general military service since the start of the war, according to a recent release from the War Department. Accepted into the Army under lowered dental requirements, these men were treated by the Army Dental Corps to correct defects, cure dental diseases and provide dentures. Dental requirements were lowered in October 1942, since which time about one man in a thousand has failed to meet maximum dental requirements. Since Pearl Harbor, more than 1,075,000 new dentures have been furnished and Army personnel have had more than 31,142,000 teeth filled. More than 56,000 bridges, 220,000 denture repairs and 323,500 prophylactic and pyorrhea treatments have been provided. During the latter months of 1943, 30 per cent more teeth were replaced by dentures and bridges than were extracted by the Dental Corps. It is estimated on the basis of past experience that there will be a minimum of 60 extractions for each hundred men inducted, and about 15 new dentures. The average man will require five or six fillings, in addition to various other dental services. About 3.5 per cent of newly inducted personnel wear one or more dentures.

## COLOR FILMS

The motion picture in color, "Continuous Caudal Analgesia in Obstetrics," which was made available by Eli Lilly and Company, Indianapolis, for showing before medical societies and hospital staffs, has been in continuous demand since release several months ago. It was made at the U. S. Marine Hospital, Staten Island, by authorization of the Surgeon General, U. S. Public Health Service, and the demonstrations were carried out by Drs. Hingson and Edwards, originators of the technic.

The three films that were made at the Nutrition Clinic of the University of Cincinnati in the Hillman Hospital, Birmingham, Alabama, under the joint auspices of the Department of Internal Medicine at the University of Cincinnati and the University Hospitals of Cleveland have likewise been in constant circulation. One of these deals with thiamin chloride deficiency, one with nicotinic acid deficiency, and the third with ariboflavinosis.

None of the films contain advertising. They are available to physicians for showing before medical societies and hospital staffs.

# News of the State

## PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

T. H. Culhane, M. D., Rockford who has been a medical officer with the armed forces for the past fifteen months, was recently promoted from Captain to Major. When last heard from, Major Culhane was with the armed forces in the United Kingdom, after having had experience on many fronts in Africa and Europe, as well as in the South Seas.

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Brig. Gen. Percy J. Carroll, a native of East St. Louis, commanding officer of Vaughan General Hospital at Hines, was decorated on March 31st with the distinguished service medal for conspicuous success in the evacuation of 225 wounded men from Manila, P. I., to Australia.

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The magazine SELECTIVE SERVICE published in Washington D. C., for February 1944 carried the following story

ORIGINAL MEMBERS OF LOCAL BOARDS STILL SERVING.

With the Selective Service System in operation for more than 3 years, it is a splendid tribute to the loyalty of its local board members, as well as to their effciency, that 13,000 of the 21,389 individual members, or more than 60 percent, have served continuously since they were appointed in the fall of 1940.

Commenting on the fact that the three original members of McLean County (Ill.) Local Board No. 1, William J. O'Hara, James R. Herman and Dr. W. B. Eaton, and the examining physician, Dr. Frank Deneen, have served since the board was organized in October 1940, the Bloomington (Ill.) Daily Pantagraph declares the record one that "deserves the applause of the entire community."

POST GRADUATE CONFERENCE
DANVILLE, ILLINOIS APRIL 27, 1944.

The Post Graduate Committee of the Illinois State Medical Society and the Vermilion County Medical Society extend an invitation to all doctors to attend a Post-Graduate Conference to be held at the Hotel Wolford, Danville on April 27th.

A complimentary luncheon will be served at 12:30 and the scientific program will begin promptly at 1:30. The following program has been arranged.

1:30 - 2:00 — "Uses and Abuses of the Sulfa Drugs" — Italo F. Volini.

2:00 - 2:30 — "Fractures, Diagnosis and Management" — Frederick W. Slobe.

2:30 - 3:00 — Psychiatric Problems in War Service" —

3:00 - 3:30 — "Latest Trends in Infant Feeding" —

3:30 - 4:00 — "Endocrinology and Hypertension" — James H. Hutton

4:00 - 4:30 — "Circulatory Diseases of the Extremeties" — Arkell M. Vaughn

4:45 - 5:30 — Round Tables lead by above clinicians

6:00 — Dinner — $1.50 per plate, reservations to be made with Doctor A. R. Brandenberger, Danville.

7:30 — "Tropical Diseases as They Affect Civilian Population" — Carroll Birch of the University of Illinois who has just returned from the School of Tropical Medicine, San Juan, Puerto Rico.

## LARGE ARMY HOSPITAL NEAR GALESBURG

The Army's new Mayo General Hospital, a 4½ million dollar institution, is now treating American soldiers brought back from war zones, and those injured in training throughout the country. It was opened officially Feb. 1. Col. H. L. Krafft is the commanding officer.

The huge institution was constructed on a 155 acre site of former farm land at the north limits of Galesburg. It has 77 buildings of red brick, all except eight of them of one story. A 45 room administration building and nurses and officers quarters are two stories high. A total of 1,723 beds have been provided for patients.

### NAMED FOR MAYO BROTHERS

The hospital was named after the Mayo brothers, Will and Charles, of the Mayo clinic in Rochester, Minn., and is a tribute to their contribution to the medical service in World War I.

Specialists for its huge staff were drawn from all over the country.

The institution is a city unto itself — a city of white gowned medical men and nurses. Comparing with the elements of any other city, it has its own post office, telephone and telegraph office, post exchange store, and lunchroom, laundry, gymnasium, recreation halls, and medical and quartermaster warehouses.

These are in addition to numerous offices where functional activities are carried on, many clinics ready to cure and control all forms of illness and injury, and kitchens and mess halls.

### ALL TYPES OF CLINICS AVAILABLE.

The clinics include surgeries, eye, ear, nose, and throat, dental and x-ray, all developed to a high state of proficiency. Ready to accept patients into these clinics are specialists in all fields of medical science — expert physiotherapists, surgeons, urological specialists, laboratory men, and others.

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## DEATHS

Cerilda Bromley, East St. Louis; Northwestern University Women's Medical School, 1891. Retired in 1914. Died February 4, 1944 at the age of 78.

William T. Cluney, Chicago; Northwestern University Medical School, 1901. Served on staff of Wesley Memorial Hospital for many years. Died March 2, 1944 at the age of 69.

William Parr Davidson, Decatur; Louisville Medical College, Louisville, Kentucky, 1897. Served in army medical corps in World War 1. Had practiced medicine for 46 years, 18 in Decatur. Died February 10, 1944 at the age of 82 years.

John C. Delprat, Chicago; Northwestern University Medical School, 1903. Studied in Vienna and Berlin, practiced surgery in Chicago for 40 years. Was chief surgeon of Cook County Hospital for 13 years before joining the staff of Illinois Central Hospital. Died March 2, 1944 at the age of 72.

Paul J. Faust, Chicago; University of Colorado School of Medicine, 1920. Resident staff psychiatrist at Chicago State Hospital for past two years. Died of a heart attack March 13, 1944 at the age of 41.

Floyd Emerson Fielding, Peoria; University of Louisville School of Medicine, Louisville, 1926. Had practiced medicine in Peoria for the last 13 years. Died of pneumonia February 19, 1944 at the age of 42.

Henry Robert Gledhill, Jerseyville; Columbia University College of Physicians and Surgeons, 1894. Had practiced medicine almost 50 years. President of Jersey County Medical Society. Died February 12, 1944 at the age of 75.

Charles R. Hamil, Greenview; retired; Rush Medical College, 1884. Had been awarded the "Fifty Year" pin by the Illinois State Medical Society. Died March 7, 1944 at the age of 90.

John Frank Johnson, Coal City; Jenner Medical College, 1903. Died of a heart attack February 19, 1944.

Wilfred A. Major, Chicago; Bennett Loyola University, 1914. Had practiced medicine on Chicago's south side for 27 years. Died March 13, 1944 at the age of 56.

Cornelius Mackey; Chicago; University of Buffalo School of Medicine, 1889. Practiced medicine in Chicago for 45 years. Died February 27, 1944 at the age of 85.

Beveridge H. Moore, Chicago; Rush Medical College, 1912. Chief surgeon of Shriners Hospital for Crippled Children since it opened in 1926, associate professor of bone and joint surgery at Northwestern University Medical School, senior attending surgeon at Loretto Hospital. Was a major in hospital unit No. 24 in World War 1. Died of a heart ailment February 29, 1944 at the age of 62.

Clarence Gilbert Pool, Compton; Northwestern University Medical School, 1910. Had operated the Compton Hospital for past 30 years. Died at Dixon Hospital February 21, 1944 at the age of 60.

JOHN HENRY RAACH, Wheaton; The Hahnemann Medical College and Hospital, Chicago, 1905. Had practiced medicine in Pu Page County for 39 years. Died suddenly March 13, 1944 at the age of 68.

CHARLES ELBERT ROBB, Rock Island; University of Illinois College of Medicine, 1906. Eye, ear, nose and throat specialist in Rock Island for 30 years. Died February, 1944 at the age of 63.

ISADORE SARNOFF, Chicago, retired police captain; Jenner Medical College, 1910. Died as result of injuries when his car was struck by an unidentified automobile February 26, 1944 at the age of 63 years.

FREDERIC W. SCHLUTZ, Chicago; University of Maryland, 1902. Head of pediatrics department of University of Chicago since 1930. Was a United States delegate to several Pan-American child hygiene congresses between 1929 and 1942. Had planned to make a goodwill tour of South America for the State Department when he was stricken with a heart attack. Died March 8, 1944 at the age of 63 years.

JOHN FRANK SCHRADER, Bridgeport; Medical College of Indiana, Indianapolis, 1895. Had practiced in Bridgeport for 48 years. Died February 16, 1944 at the age of 76.

DEMETRIUS STANEFF, Chicago; Cincinnati College of Medicine and Surgery, 1892; died in the Wesley Memorial Hospital January 2, aged 81, of chronic myocarditis and pneumonia.

HERMAN ERNEST STEPHEN, Joliet; Northwestern University Medical School, 1899. Had practiced medicine for 43 years. Died of a heart attack February 22, 1944 at the age of 69 years.

CHAUNCEY M. STOKES, Havana; National University of Arts & Sciences Medical Department, St. Louis, Mo., 1912. Died suddenly of a heart attack March 1, 1944 at the age of 62.

ROY L. WATSON, Joliet; Rush Medical College, 1904. Practiced medicine in Putnam County until 1911 when he went to Joliet. Retired three years ago. Died following a three weeks' illness in Florida on February 8, 1944 at the age of 64.

MAJOR H. WORTHINGTON, Chicago; Northwestern University Medical School, 1901. Superintendent of the Illinois Research and Educational Hospital of the University of Illinois; former well known resident of Geneva. Died February 27, 1944 at the age of 65.

## DUTCH DOCTORS TO RESIST GERMAN DEPORTATION

The doctor shortage has become so serious in Germany that the Nazi Labor Office in Holland is planning to deport from five hundred to two thousand Dutch physicians to the Reich. Ostensibly their services will be reserved for Netherlands workers in Germany, but actually they will be used to treat German soldiers and civilians.

The Dutch underground newspaper *Trouw* has seen through this subterfuge, and in a recent issue, exhorted the Netherlands doctors to resist deportation as effectively as they resisted German efforts to Nazify the medical profession in the past. "The danger of deportation to Germany is great," the paper pointed out. "We must count on new large-scale efforts on the part of the Germans to deport from five hundred to two thousand doctors. Already all doctors have been ordered to register at the Labor Office. The watchword must be 'No Dutch doctor goes voluntarily to Germany.'"

*Trouw* stated the following reasons why doctors should resist deportation. "It is most improbable that the Germans would allow them to treat Dutch workers — Netherlands medical students in Germany are often employed as doctors, but never in Dutch labor camps. If they go to Germany for the benefit of the German workers, they will be rendering an important service to the enemy. Once deportation of doctors begins, it will not be stopped — there would be a calamitous shortage of doctors in Holland."

Anton Mussert, head of the Dutch Nazi party, had indicated at the annual meeting of the Nazified "Medical Front" that the Germans were planning to conscript five hundred to one thousand Netherlands physicians, and asserted, "We will do our utmost to force these immoral unpatriotic doctors, who want to leave their compatriots in Germany without medical care, to do their duty."

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The greatest tuberculosis case-finding project in the history of medicine is still under way through the Selective Service examinations. Editorial, The Modern Hospital. Oct. 1943.

# P. R. N.

The Jocular Jingles of C. G. F.

by

Charles G. Farnum M. D.

Peoria, Ill.

## THE PACE THAT KILLS

**I see men rushing down the street**
**With faces drawn and tired feet,**
**Where do they go at pace so fleet;**
**And what do they do when they get there?**

**They force their way amid the throng,**
**The weak ones hurry like the strong,**
**With raucous voices rush along;**
**But what do they do when they get there?**

**Each face is marked with lines of care,**
**The shoulders stoop with what they bear,**
**The eyes all have a harried stare;**
**But what do they do when they get there?**

**No matter what the time or place**
**One always sees this mad'ning pace**
**And life seems but a wild foot race;**
**But what do they do when they get there?**

**I long for leisure and some smiles,**
**And friendliness that so bequiles,**
**And shortens all the weary miles,**
**And brings us more joy when we get there.**

## GERIATRIC JOCULARITIES

With a decompensated heart and a tracheo-bronchitis Mr. JBG kept us in a state of apprehension for many weeks. He was 88 years old.

After a long convalescense he was able to go for a walk, still unsteady of gait and a bit confused.

As he walked down the block he met a lady whom he had known for more than half a century.

She said, "I am so glad to see you out again, Jim. How are you?"

To which the old gentleman replied, "I'm just fine. You know I haven't had a doctor in forty years."

We wonder if perhaps he was right.

## QUARRELSOME QUATRAINS

*Our lives are filled with bitter disappointments,*
*We rarely get the things for which we pine,*
*The garland that we thought was orange blossoms*
*Turns out to be a poison ivy vine.*

## PARNASSUS MODERNE

In the ancient days Parnassus
Was a mountain most sublime,
Where the Muses that surpass us
Wrote their poetry and rhyme.
In every probability
Their life was all tranquility.

But my present day Parnassus
Is a room and bed in white,
Where the things they do harass us
And one finds no time to write.
With interruptions coming hourly
One cannot write or does it dourly.

For when I start writing a clever suggestion
On hot water bottles, both wet ones and dry,
An interne stalks in and starts gravely to question
The date I was born, also where and just why.

He pokes in my abdomen, pounds on my bosom,
Shines lights in my eyes and takes blood from my veins,
Tries all kinds of 'scopes — how I wish he would lose 'em.
And queries concerning my aches and my pains.

That done I launch forth on a diatribe vicious
On hospital gowns and the crumbs in my bed
And hot rubber sheets and the diet they dish us.
I write it? I do not. I get scrubbed instead.

They scrub 'til my skin is all red or denuded,
Thermometers stop all the protests I make,
My ears and my mouth and my eyes are included,
Beneath a scant towel I shiver and shake.

Fluoroscopy, tests as to things metabolic,
My heart is gone over six times every day,
And when I get set to write things vitriolic
I'm put on a cart and am rushed to x-ray.

I swallow a hose, find the episode drastic,
A barium diet I would not select,
I outline a sonnet most keen and sarcastic,
It never is written as one might suspect.

The nurses float in — most superior creatures,
Pretend to do that or forget to do this;
The ode I inscribe will not be to their features,
I'll write of their technique, not wholly amiss.

My doctors are splendid, give more than is due me
In science and service. Ye gods, they are nice!
I'll pen two large volumes on what they did TO me,
On what they did FOR me two lines will suffice.

My life on Parnassus is hectic and busy —
A doctor goes out and a nurse heaves in sight;
I'm so interrupted I'm weary and dizzy
And cannot find even a moment to write.




## *Only thorough anti-anemic therapy insures permanent recovery . . .*

● *Supplying iron alone* for chronic anemias can exhaust the reserve of stroma-building materials.

*Supplying a single liver factor* fails to provide other essential hemoglobin-building materials.

*Supplying Bepron*, however, provides ferrous iron *plus* all the water-soluble principles of fresh, whole beef liver.

So, Bepron insures quick return to normal blood levels. And recovery is *lasting.** Furthermore, Bepron's effectiveness is *independent of patient's diet.* Bepron is supplied in 8 oz. and pint bottles.

• • •

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John Wyeth & Brother, Division WYETH
Incorporated, Philadelphia.

*GOTTLIEB, R. Whole Liver as an Adjuvant to Iron in the Treatment of Hypochromic Anemia, Canadian M. A. J. 47: 456-460 (Nov.) 1942.

**BĒPRON**
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BEEF LIVER
WITH IRON

*Wyeth*

# TIME CANNOT BE BOUGHT...SAVE IT

DI-OVOCYLIN* calls for fewer injections at longer intervals and results in prolonged . . . effective . . . estrogenic action.

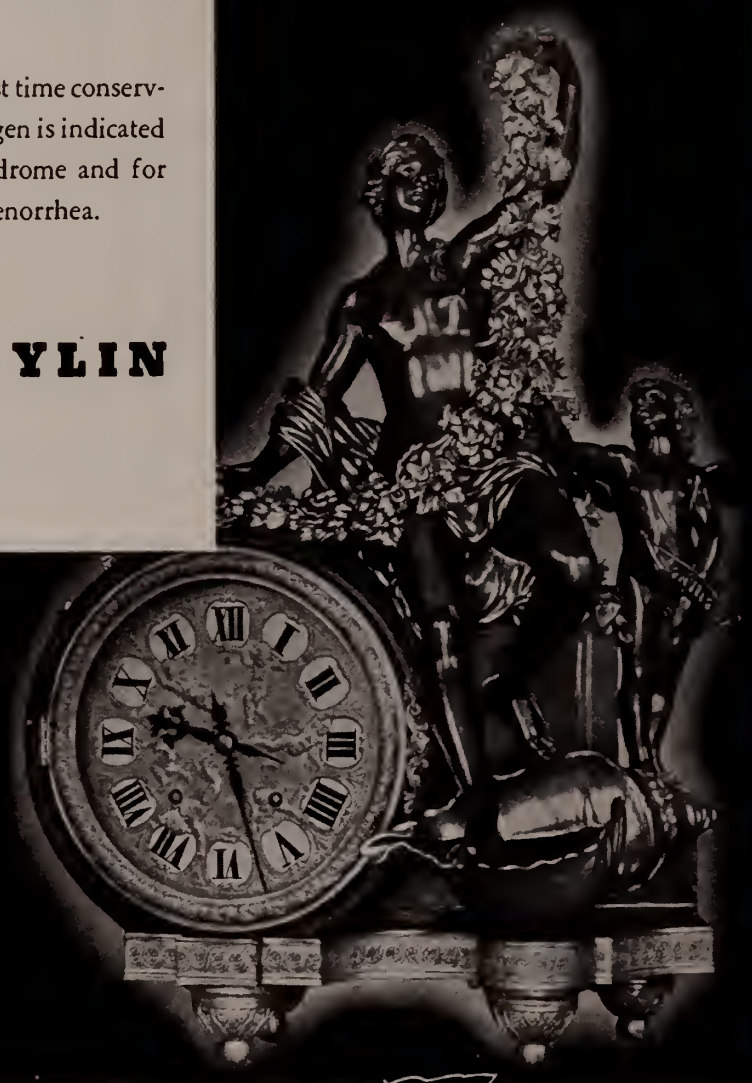
This economical . . . most time conserving . . . and potent estrogen is indicated in the menopausal syndrome and for the prevention of dysmenorrhea.

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CANADIAN BRANCH: MONTREAL, QUEBEC

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For standard formulas, simply dilute 1 fl. oz. of Biolac with 1½ fl. ozs. water. Feed 2½ fl. ozs. of this formula daily for each pound of body weight.




## BIOLAC minimizes errors!

Less chance of upsets due to errors in preparing formulas. Less chance of formula contamination, too, because all ingredients in Biolac are sterile. It requires only simple dilution with boiled water, as you prescribe.




*NO LACK IN*

**BIOLAC**

**Borden's complete infant formula***

**Biolac is prepared from whole milk, skim milk, lactose, vitamin $B_1$, concentrate of vitamins A and D from cod liver oil, and ferric citrate. Evaporated, homogenized, sterilized. Vitamin C supplementation only is necessary. For detailed information, write Borden's Prescription Products Division, 350 Madison Avenue, New York 17, N. Y.*



# STAYING POWER

Aggressive little atom of American bird-life, the beautiful Humming-bird flies so fast that the eye can scarcely follow. It operates its wings with such incredible power and speed that it is enabled to stand still—literally poised in air—as it gleans the nectar of flowers.

Similarly, the ability to remain "poised" over painful areas is attributed to small quantities of EUCUPIN, the local anesthetic-analgesic agent. Like the Humming-bird, Eucupin possesses a remarkable kind of *staying power*—the kind that controls pain for longer periods than any other agent, the effect lasting for hours and even for days.

Eucupin has been especially formulated for particular indications. They are described in a literature booklet, which, together with samples, is available to physicians on request. Please indicate form desired.

*Supply:* Aqueous and oil solutions for infiltration; ointment and suppositories; tablets for solutions to be applied topically.

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*Brand of Isoamylhydrocupreine*
*Non habit-forming . . . Reduces need for narcotics*

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*Manufacturing Chemists*

*"Eucupin" Reg. U. S. Pat. Off.*

**The local anesthetic-analgesic with "STAYING POWER"**

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*'Dexin' does make a difference*

COMPOSITION

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| Dextrins | 75% | Mineral Ash | 0.25% |
| Maltose | 24% | Moisture | 0.75% |

Available carbohydrate 99%
115 calories per ounce
6 level packed tablespoonfuls equal 1 ounce

Takes his 'Dexin' formulas avidly, plays cheerfully, sleeps well. And with all this comes mother's thorough satisfaction in a smooth routine, a happy baby, and her greater enjoyment of motherhood.

'Dexin' helps assure uncomplicated infant feeding. Its high dextrin content (1) diminishes intestinal fermentation and the tendency to colic and diarrhea and (2) promotes the formation of soft, flocculent, easily digested curds.

'Dexin' promotes good feeding habits. Palatable 'Dexin' formulas are not excessively sweet, and do not dull the appetite. Babies take other bland supplementary foods with less coaxing. 'Dexin' is readily soluble in hot or cold milk.

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# 'DEXIN'

HIGH DEXTRIN CARBOHYDRATE

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**HEMATINIC PLASTULES***

The iron supplied in Hematinic PLASTULES is *ferrous iron*—recognized as the ideal form for quick, thorough assimilation and conversion into hemoglobin. It *stays* in this form because it is hermetically sealed in soluble capsules that prevent oxidation.

And, as Hematinic PLASTULES quickly dissolve in the stomach, the ferrous iron in semi-fluid state is immediately ready for assimilation.

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THE "RAMSES"* Diaphragm Introducer, designed after consultation with gynecologists, engages the rim of the "RAMSES" Flexible Cushioned Diaphragm at two points, shaping it into an elongated oval, thus enabling it to pass readily into the vagina. By providing complete control over the direction of travel, the "RAMSES" Diaphragm Introducer assures proper and accurate placement of the diaphragm.

**1.** The wide, blunt tip of the "RAMSES" Diaphragm Introducer is designed to prevent even the remote chance of accidental penetration of the uterus during insertion of the diaphragm.

**2.** Made of easily cleansed plastic, the "RAMSES" Diaphragm Introducer has no minute crevices to harbour bacterial growth—no sharp projections to cause possible vaginal injury.

**3.** The broad, rounded hooked end of the "RAMSES" Diaphragm Introducer—used for diaphragm removal—guards against possible entry into the urethra.

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Gynecological Division
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# Book Reviews

MANUAL OF DISEASES OF THE EYE. By Charles H. May, M.D., Consulting Ophthalmologist to Bellevue, Mt. Sinai and French Hospitals, New York; formerly Chief of Clinic and Instructor in Ophthalmology, Medical Department of Columbia University, and Director of the Eye Service at Bellevue Hospital, New York, with the assistance of Charles A. Perera, M.D., Associate in Ophthalmology, College of Physicians and Surgeons, Medical Department of Columbia University, New York; Assistant Attending Ophthalmologist, Presbyterian Hospital, New York. Eighteenth Edition, revised. Cloth. Price, $4.00. Pp. 520, with 387 illustrations including 32 plates, with 93 colored figures. Baltimore: William Wood and Company, 1943.

This popular and extensively used and quoted manual has reached its eighteenth edition. A work of this sort, which still remains popular after eighteen editions over a period of forty years, is sufficient testimony as to its popularity and worth. The book has been translated into ten different foreign editions.

It is stated that this is a book intended particularly for general practitioners. True as that may be, the book is likewise almost a standard, quick reference for those who specialize in ophthalmology. There is no subject that is not at least mentioned in this book, and those that are of importance are dealt with at considerable and quite sufficient length.

An important and worthwhile feature of the book is the department concerning eye injuries, which contains a ready reference for those who are called upon to give opinions as to fair compensation for these injuries. In the same section of the book there is contained the latest report of the Committee of the Eye Section of the A.M.A. on Visual Efficiency.

The appendix, giving the visual requirements for admission to the Armed Forces, is of value in a suggestive way; it, at least, is up to date, but with the changes that are taking place in rules, regulations and directives, one should be on guard to consider these as up to date. However, one is warned that they represent only present standards.

In spite of the many additional new features of the book, it has not been increased in size.

This book is recommended to all those needing a quick reference on diseases of the eye, to students, nurses and those interested in diseases of the eye generally. It should be on every practioner's shelf.

It is of interest to note with regret that Dr. Charles H. May recently passed away, but it is hoped that his relative, Dr. Perera, will continue to publish the book.

W.S.

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METHODS FOR DIAGNOSTIC BACTERIOLOGY. Isabelle G. Schaub, A.B. and M. Kathleen Foley, A.B. Second Edition, The C. V. Mosby Company, St. Louis, 1943. Price, $3.50 — pp. 430 with Index.

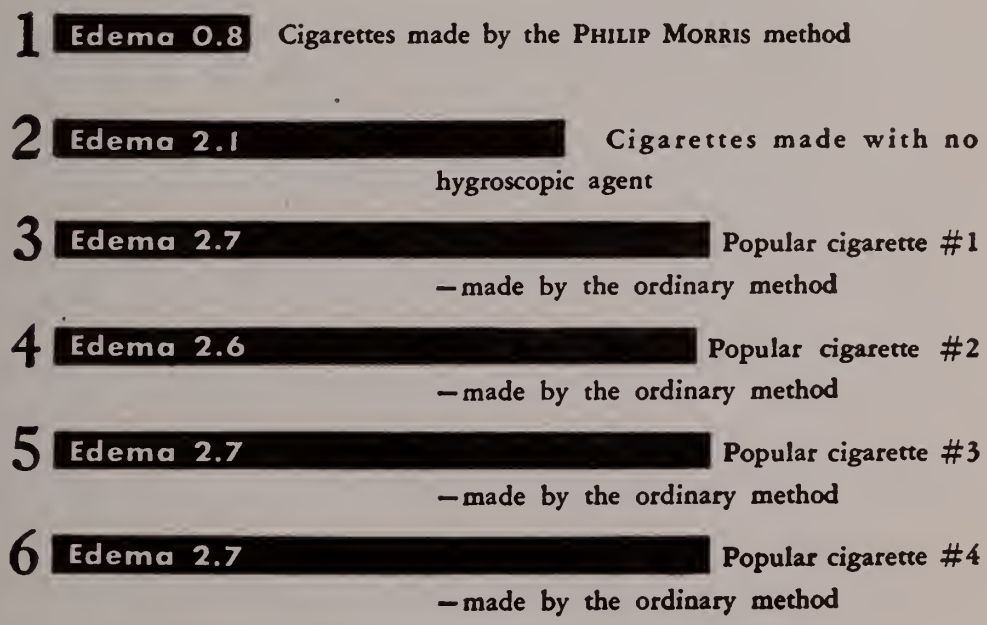
This book is primarily a manual and is intended chiefly as a work book for students with some background in theoretical bacteriology. As such it fulfills its purpose admirably.

Directions for the preparation and examina-

(*Continued on page* 42)

# How irritation varies— from different cigarettes

*Tests made on rabbits' eyes reveal the influence of hygroscopic agents*




**CONCLUSION:*** Results show that regardless of blend of tobacco, flavoring materials, or method of manufacture, the irritation produced by all ordinary cigarettes is substantially the same, and measurably greater than that caused by PHILIP MORRIS.

**CLINICAL CONFIRMATION:**** When *smokers* changed to PHILIP MORRIS, every case of irritation of the nose and throat due to smoking cleared completely or definitely improved.

**N. Y. State Journ. Med. 35 No. 11,590* ***Laryngoscope 1935, XLV, No. 2, 149-154*

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Dependable
Potency
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Lower Toxicity
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BOOK REVIEWS (Continued)

tion of clinical and autopsy material are brief and explicit. Culture media and reagents recommended are those which have been proven satisfactory by many bacteriologists and have the added feature of simplicity of preparation.

The "day by day" plan for the identification of organisms is readily applicable and should be of considerable aid to the inexperienced technician and student.

This edition includes a chapter discussing the identification of pathogenic bacteria by means of colony characteristics. It is unfortunate that the frequency of both atypicality of these colonies and the similarity of appearance of non-pathogenic colonies are not further stressed.

Some of the procedures described such as the serological grouping of beta hemolytic streptococci are not readily adaptable to use in the ordinary hospital laboratory. It is well, however, that the student be acquainted with these technics.

The book is one of the best of its kind in the field of diagnostic bacteriology and is well worth including in the library of a clinical laboratory.

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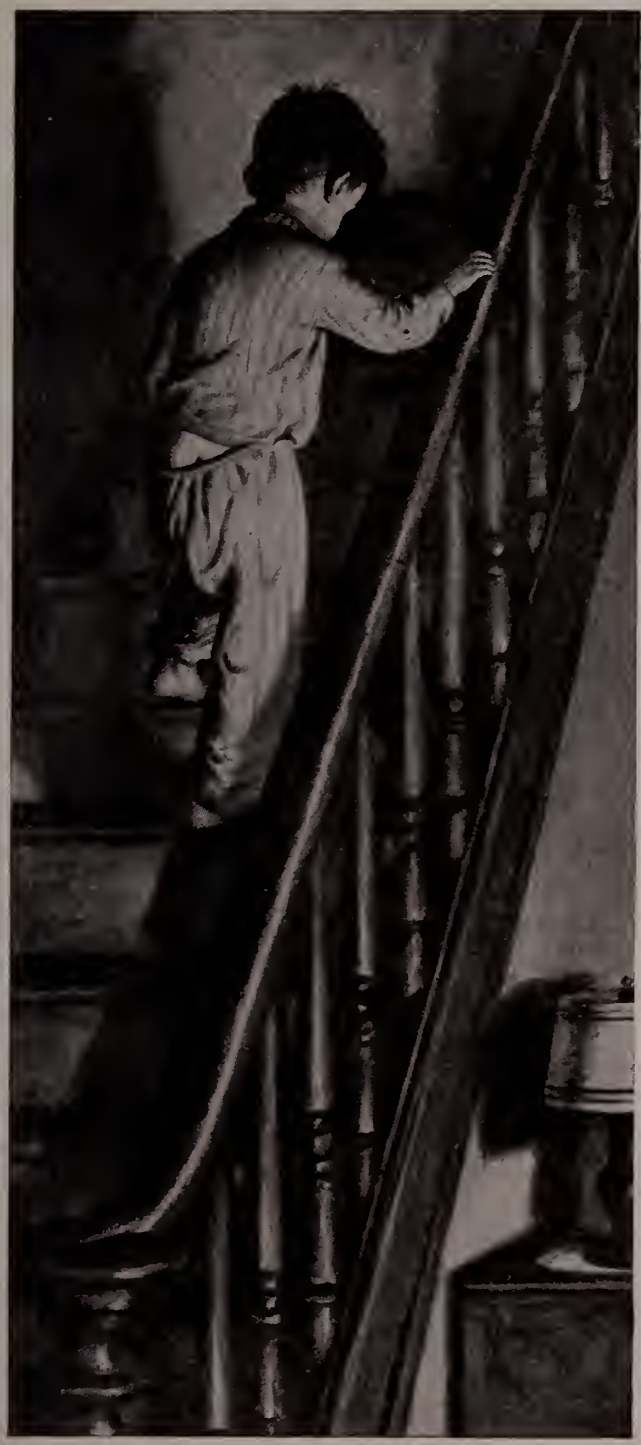
THE GENEALOGY OF GYNECOLOGY. By James V. Ricci, M.D. The Blakeston Company, Philadelphia, 1943.

The genealogy of gynecology deals with the known facts of this subject from 2000 B.C. to 1800 A.D. An immense amount of factual data has been collected from original sources which makes of this book an authoritative reference work for the specialist in this field. At the same time the subject matter has been presented in such an interesting manner that it is fascinating reading for any physician, and could be read with profit by non-professional people seeking historical data along this line. For example, the recorded medical facts here presented throw a flood of light on the underlying causes of the dissolution of the Roman Empire due to the vice and corruption incident to that period.

Not less interesting are the chapters on Greek, Hindu and Egyptian gynecological practice. The later part of the book is illustrated by excellent reproductions of ancient drawings showing the anatomy, and conception of pathology

(*Continued on page* 44)

# *Missing...*



"Missing in action." You know what that can mean.

Mom says you must be brave. "It's what your father would expect of us," she tells you when it's bedtime and your chin starts to feel shaky. Then she kisses you extra hard and turns her head away so you can't see her eyes.

You've never let her see you cry. Not once, since that telegram came and she twisted it all up in a ball, then smoothed it and put it in the desk.

But, lying in bed, you play "Pretend" — pretend you can hear his step as he comes up to your room — pretend you can feel a stubble brush your forehead. And sometimes, in the dark, you can almost smell a cigarette-y suit close to your face.

Later you dream — dreams that you don't tell about. And in the morning you wake up with that funny, empty feeling in your stomach.

★ ★ ★

Poor little guy. We — all of us — wish there were something we could do. Perhaps there is. Why shouldn't it be this?

We can resolve that the plans your father had for you shall remain within your reach, that you shall have the chance to grow and learn, that your opportunities will be bounded only by your own get-up-and-go, that you will progress and prosper in direct relation to your own ability — in a land of freedom and opportunity.

Those are the things your Dad valued, the things for which he gave his life. Though some may strive to change all that — provide you with the "benefits" of an all-powerful government, the "advantages" of regimentation, the "blessings" of bureaucracy — we can resolve they won't succeed.

★ ★ ★

You, son, won't read these words, and if you did, they wouldn't mean much to you now. But your father's friends — known and unknown — are making you a promise, just the same.

You may never hear it from their lips. But if you were older you would read it in their faces — recognize it in their spirit. They are determined to keep America free. To keep it a land in which government is the servant, not the master of the people. To keep it the kind of America your Dad wanted to preserve — for you.

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## BOOK REVIEWS (Continued)

as understood by the medical men of that time. Interesting pictures of old instruments are also displayed. Case reports gleaned from old text books and manuscripts are presented in a very interesting manner.

One of the most attractive features is an extensive bibliography which will permit the student of gynecology to get at the sources of information with the least effort. Some idea of the completeness of the work can be obtained from the fact that twenty-four pages have been devoted to an index of personal names referred to in the text.

The book is beautifully bound, excellent paper and will serve admirably as a reference book in any library.

F.H.F.

---

GASTRO-ENTEROLOGY. Bockus, Vol. II, W. B. Saunders Co., Phil. & London, 1944. Cost, $35.00.

This second volume of an encyclopedic, three-volume series clearly describes the anatomy, physiology, embryology and clinical approach to diseases of the small and large intestines and the peritoneum. The approach is modern, and an excellent bibliography is provided at the close of each chapter. This bibliography has been derived principally from the American literature.

Worthy of special mention are those chapters dealing with intestinal obstruction, functional disorders of the colon and chronic stenosing regional enterocolitis (regional ileitis). The latter is well illustrated by excellent colored plates in the text.

Here is a book that will prove valuable to every practicing gastroenterologist and internist and should be easily accessible to every general practitioner.

W.

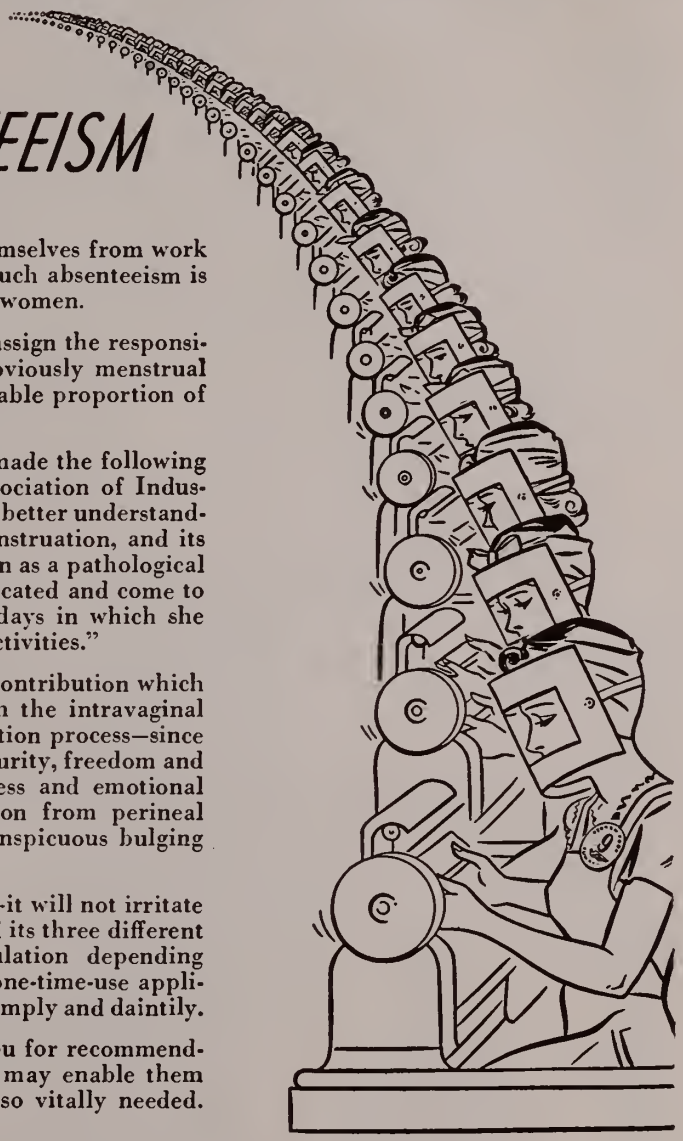
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OFFICE TREATMENT OF THE NOSE, THROAT AND EAR. Abraham R. Hollender, M.D., F.A.C.S. Illinois Research and Educational Hospitals, Chicago. Associate Professor of Laryngology, Rhinology and Otology, University of Illinois College of Medicine. The Year Book Publishers, Inc., Chicago.

(*Continued on page* 47)

# OBJECTIVE

## *REDUCTION OF FEMALE ABSENTEEISM*



Statistics show that women absent themselves from work much more often than men; indeed, such absenteeism is said to be 50 per cent[1] higher among women.

Though available data do not clearly assign the responsibility for this marked differential, obviously menstrual inconveniences account for a considerable proportion of the days lost.

On this point Pommerenke[2] recently made the following observation before the American Association of Industrial Physicians and Surgeons: "With a better understanding of the purpose and nature of menstruation, and its recognition as physiological rather than as a pathological process, many a woman may be re-educated and come to regard the so-called difficult days as days in which she need not seriously curtail her usual activities."

Many physicians have discovered the contribution which *improved menstrual hygiene* (as with the intravaginal tampon Tampax) affords this reeducation process—since it provides such a welcome sense of security, freedom and poise by relieving the physical distress and emotional uncertainty caused by vulval irritation from perineal pads, or from olfactory offense, or conspicuous bulging under slacks or coveralls.

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(1) Mod. Med., 11:130, 1943; (2) Ind. Med., 12:512, 1943

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BOOK REVIEWS (Continued)

In this book the author chooses a practical subject and adheres strictly to that subject. He presents all and only the office procedures which are applicable in the field of nose, throat and ear.

It is an ideal quick reference for both the general practitioner and specialists and is especially valuable to the young physician, who though well trained in the various hospital procedure has not experienced the difference between hospital and office practice.

Sec. 1. sets forth, in detail, the methods of therapy employed in oto-rhino-laryngology including immunization, physical therapy office surgery, endocrine therapy, nutrition, pharmacotherapy and radiation therapy.

Sec. 2. Is especially set up for quick reference with mention of the various methods of proved treatments.

Each chapter concludes with "Evaluation" in which the author summarizes the various meth-

(*Continued on page* 50)

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BOOK REVIEWS (Continued)

ods of treatment and makes his own recommendation.

Many formulae are presented and some attention is given to diagnosis. Illustrations are profuse and clear, many of them are actual photographs.

The author omits no detail and his statements are simple, and scientific.

The chapters on vaccines, acute sinusitis and chemotherapy are deserving of especial mention.

FCW.

---

# Books Received

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

SULFONAMIDE THERAPY IN MEDICAL PRACTICE: By Frederick C. Smith, M.D., M.Sc. (Med.), F.A.P.S., Editor of Philadelphia Medicine, official organ of the Philadelphia County Medical Society; Editor of The Medical World; Lieutenant Colonel, Medical Reserve Corps, Army of the United States. Foreword by George Morris Piersol, B.S., M.D., Professor of Medicine, Graduate School of Medicine, University of Pennsylvania; Editor-in-Chief, The Cyclopedia of Medicine, Surgery and Specialties. Illustrated with Numerous Engravings, Graphs and Tables. F. A. Davis Company, Publishers, Philadelphia, 1944.

CLINICAL LECTURES ON THE GALLBLADDER AND BILE DUCTS: By Samuel Weiss, M.D., F.A.C.P., Clinical Professor of Gastroenterology, N. Y. Polyclinic Medical School and Hospital; Gastroenterologist, Jewish Memorial Hospital, N. Y.; Consulting Gastroenterologist, Beth David Hospital, N. Y., Long Beach Hospital, Long Island. The Year Book Publishers, Inc., Chicago. Price $5.50.

THE FOOT: By Norman C. Lake, M.D., M.S., D.Sc. (Lond.), F.R.C.S. (Eng.), Senior Surgeon and Lecturer on Surgery, Charing Cross Hospital; Surgeon, Bolingbroke Hospital; Consulting Surgeon, Emergency Medical Service; Director of Studies, London Foot Hospital; Late Senior Examiner in Surgery, University of London, and External Examiner in Surgery, Victoria University, Manchester. Third Edition, The William and Wilkins Company, Baltimore. 1943. Price $5.00.


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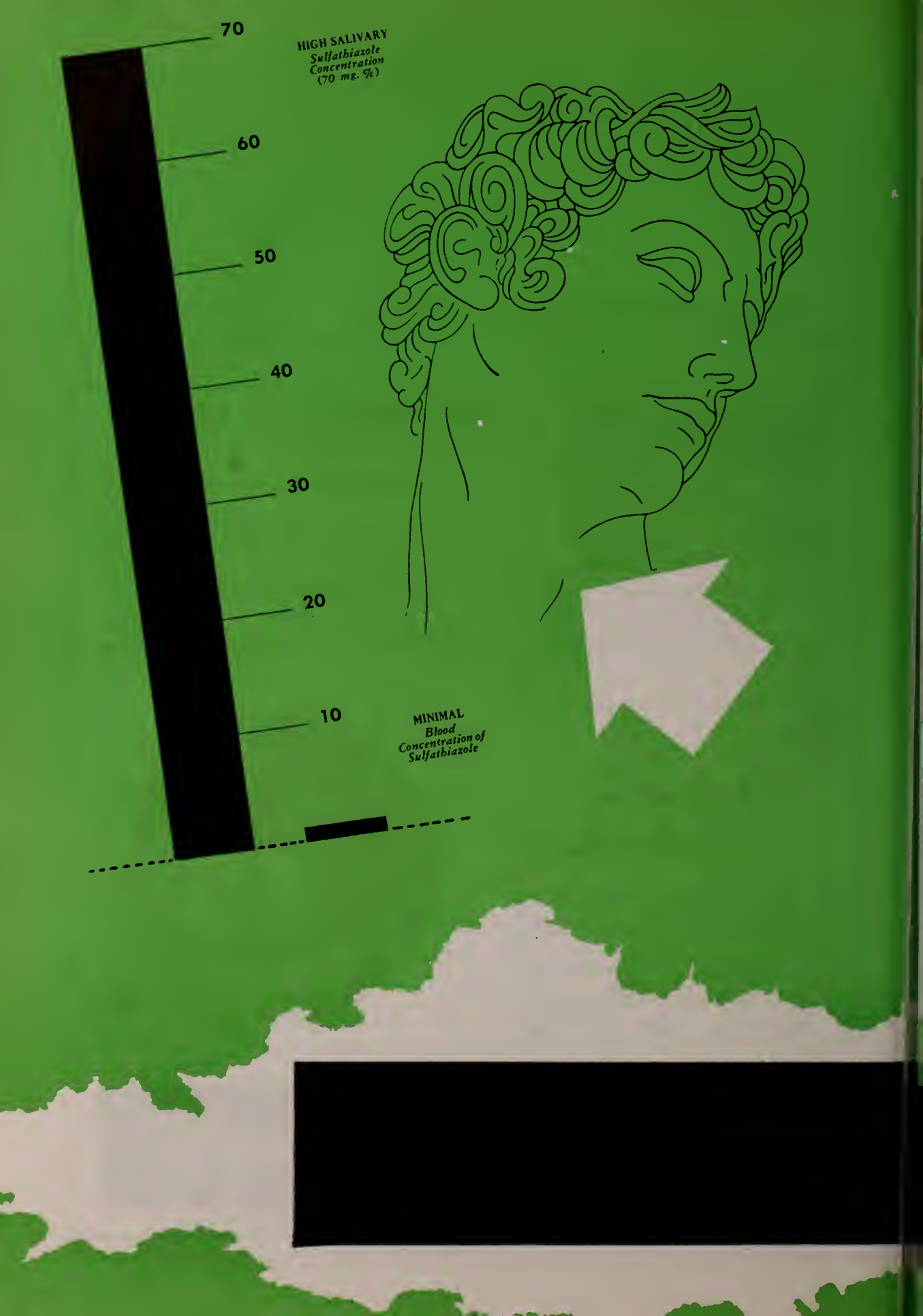
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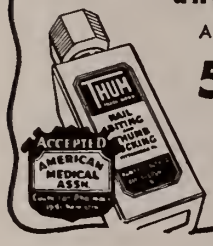
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## NEW TECHNIC MAY HELP DONORS GIVE PLASMA MORE FREQUENTLY

### Report Preliminary Studies On Reinfusion Of The Red Cells After Liquid Portion Of The Blood Has Been Removed

Preliminary studies, reported in *The Journal of the American Medical Association* for February 5, indicate that by reinfusing into donors the red blood cells that are left after the plasma has been separated, the frequency of blood donations might be safely increased to the point where the entire plasma requirements of the armed forces might be obtained from a vastly smaller number of persons than is now possible under the system of eight week intervals between donations.

From their findings in a study of 6 volunteer donors who were subjected to frequent blood donations, each one followed by a reinfusion of the red cells, Co Tui, M.D., New York; F. C. Bartter, M.D., Brooklyn; A. M. Wright, M.D., New York, and R. B. Holt, M.D., Washington, D. C., already are able to recommend "that the practice of reinfusion of red cells into the donors be adopted where there is malnutrition in the donating population and/or where a large proportion of the donors are women."

More extensive studies will be necessary, the investigators point out, before it can be concluded how much more frequently it will be safe to bleed donors provided red cells are reinfused.

The average donation of 500 cc. (approximately one pint) of blood entails the loss to the donor of approximately 75 Gm. of hemoglobin and 17.5 Gm. of plasma proteins, or a total of approximately 92.5 Gm. of proteins (taking hemoglobin

(*Continued on page 56*)

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BLOOD DONORS (Continued)

for practical purposes as 100 per cent protein)," the authors say. "The red cells as a rule may be said to be wasted. This waste in the 5 million units of plasma required by the armed forces this year represents a loss of 375,000 Kg. of human hemoglobin and 188 Kg. of iron!

"If, however, the red cells are reinfused into the donor, then he is relieved of 80 per cent of this protein drain and from purely quantitative considerations should be able, theoretically, to donate plasma five times more frequently than is the practice at present, which is at most one donation every eight weeks. The present work is an attempt to determine within what range this mathematical consideration holds true. . . ."

In their study, a group of 6 volunteer donors, each on a federal government prescribed diet adequate both in calories and nitrogen intake, were subjected to frequent blood donations. In the first group of 3 donors, donor 1 gave three donations and donors 2 and 3 gave four each on alternate days, receiving back the red cells suspended in 5 per cent dextrose solution the day subsequent to the bleeding. The total amount bled was in each case approximately 34 per cent of the blood volume calculated from the body weight.

It was found that final determinations of blood cell values and plasma protein levels were practically the same after the donations as the initial values, although after each bleeding and before the reinfusion of red cells they registered a slight drop. The count of young red blood cells was always within normal limits.

In the second group of 3 donors, each gave a full sized donation weekly, 1 for nine weeks and 2 for twelve weeks. It was found that there is no perceptible change in the blood picture as the result of this program.

"As far as can be determined by a review of the literature," the four investigators say, "the prescription of the eight week interval between blood donations has been made by the work on hemoglobin and red cells regeneration. This period seemed logical when the whole blood was used. However, as a result of a shift in therapeutic emphasis to the use of plasma a somewhat illogical situation now exists in that the rate of regeneration of a waste product is made to be the


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pacemaker of another product. plasma proteins, which for all that is known may have an entirely different replacement rate. . . ."

They say there are two schools of opinion on how frequently a person may donate whole blood. There are some who believe 500 cc. at intervals of a week or more is safe while some others say that if 400 cc. or less is donated, male donors may be used four or five times at intervals of one to five days without ill results. One investigator and his colleagues found that hemoglobin regeneration in a 10 Kg. dog may be as rapid as 75 Gm. per week. The authors say that "At this rate a 60 Kg. man would be able to synthesize in one week six times the hemoglobin he gives in each donation."

In the more conservative school are some who say donations of 500 cc. should not be given oftener than every three months.

Most investigators caution that female donors are more liable to develop anemia after a donation than are males.

It was found in a study of professional donors in China that there was a large incidence of postdonation anemia. This was attributed to the undernutrition of these subjects.

The rate of plasma protein regeneration, the authors say, has been studied mostly in the dog, and there is scarcely any literature available on human beings. The findings of one group of investigators in dogs would be the equivalent to 1,150 cc. of plasma in a week. However, the authors say, the ceiling of plasma protein synthesis is not necessarily identical with the ceiling of plasma proteins available for donations.

Between the present limit of 17.5 Gm. donated every eight weeks and the theoretical possibility of 55 Gm. donated daily, there is a range of 18,000 per cent, the authors say, adding that "Within this wide range can be found a practical level for a full but safe exploitation of what may be called the plasma resources of the donating population. . . ."

One caution, however, must be exercised in the reinfusion of cells, namely the necessity of avoiding pyrogenic (fever producing) reactions, they advise, adding that this can be acomplished by utilizing certain protective measures.

(*Continued on page* 58)

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BLOOD DONORS (Continued)

"It may be permissible to speculate on the possibilities of this study," the four investigators say. "The American Red Cross at present utilizes a random and purely chance donor population. To obtain the 5 million units of plasma required by the armed forces would require in the neighborhood of 832,000 donors, provided each donor donated religiously every eight weeks. An increase of only one donation per donor during this period would have increased the availability of donors by 100 per cent. And, if it is finally found safe to obtain weekly plasma donations, the availability would be increased by 800 per cent! If this should be the case the entire military plasma program could be supported by a population numbering approximately 120,000.

"The practical aspects of the routine reinfusion of red cells may now receive some consideration. . . . In blood banks which draw their donors from a population having to travel considerable distances to the bank, the drawn blood could perhaps be immediately centrifuged and the cells reinfused on the same day. This would

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entail a somewhat longer wait but might eliminate the problem of post-transfusion syncope (fainting)...."

It is pointed out in the conclusions that the investigators have projected a study "to determine the natural pacemaker of the frequency of plasma donations and thus to explore the feasibility of obtaining plasma at more frequent intervals than the prevailing eight week minimum."

## REPORT GAS GANGRENE TREATED SUCCESSFULLY WITH PENICILLIN

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The successful treatment with penicillin of a case of gas gangrene is reported by W. B. McKnight, M.D.; Richard D. Loewenberg, M.D., and Virginia L. Wright, M.D., Portola, Calif., in *The Journal of the American Medical Association* for February 5. The authors say that it was recently stated that penicillin, experimentally, is a potent agent in gas bacillus infections, but up to that time there had been no studies on human cases.

The importance of the report is emphasized by the fact that although gas gangrene is a comparatively rare infection in civilian life, it is a serious menace in military operations. The mortality rate in civilian cases has been estimated at 49.7 per cent while the death rate from the infection in the American Expeditionary Forces in France in the last war was 48.52 per cent.

The three California physicians report that

(*Continued on page* 60)

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PENICILLIN (Continued)

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Even with the present and comparatively low rates of tuberculosis mortality prevailing these days, it is estimated that in the entire world tuberculosis still causes more than two million deaths in a single year. Godias Drolet in Clinical Tuberculosis, Edited by Benjamin Goldberg, M.D., 1942.



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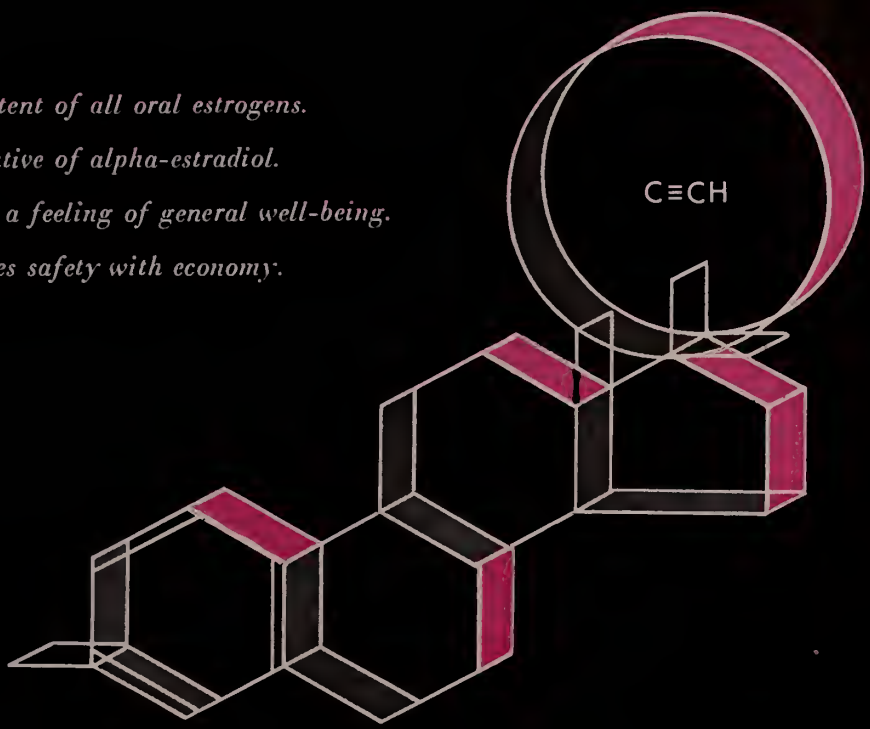
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VOL. 85 NO. 5

May, 1944

In This Issue

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(See page 31 for Table of Contents)

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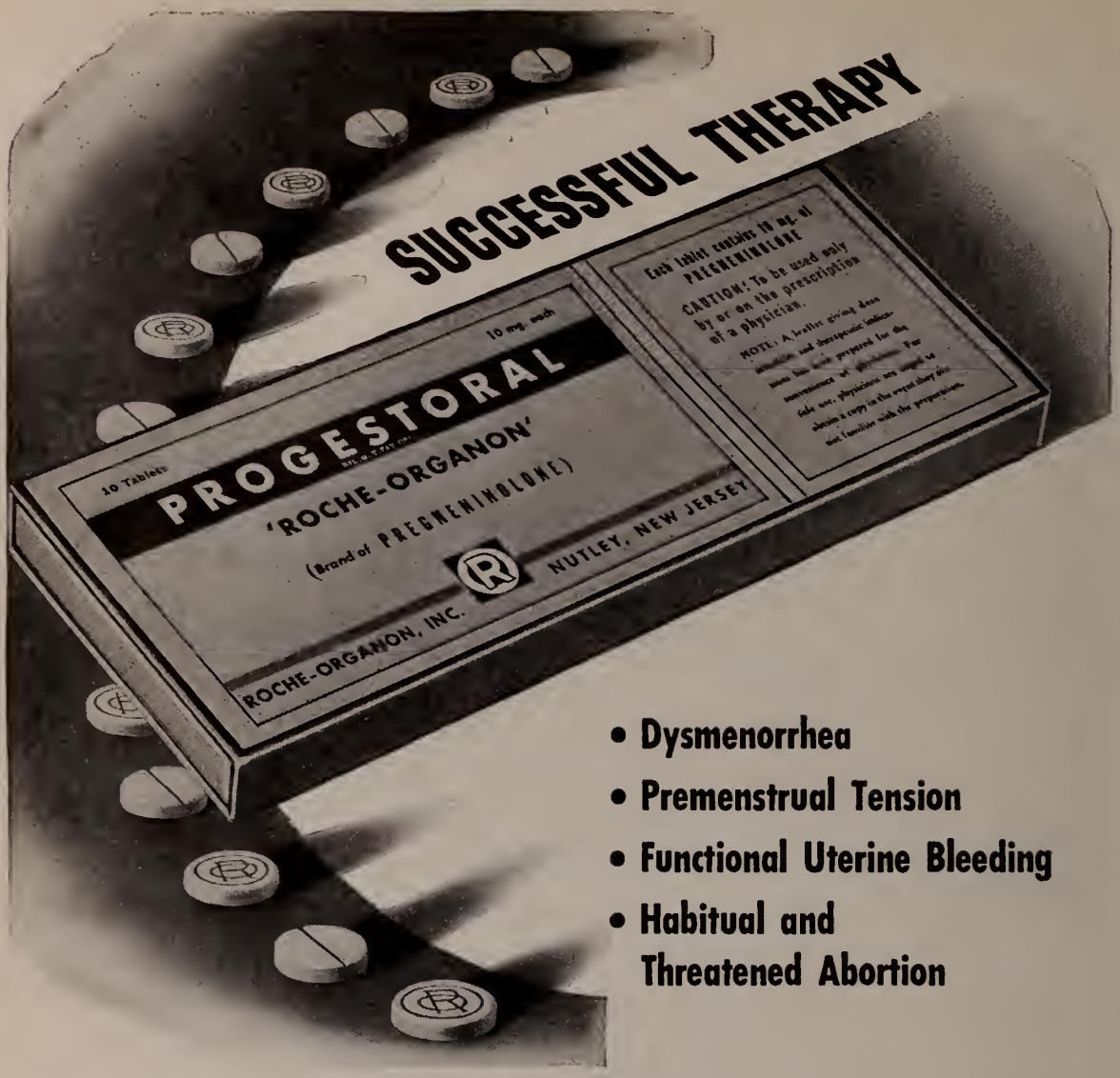
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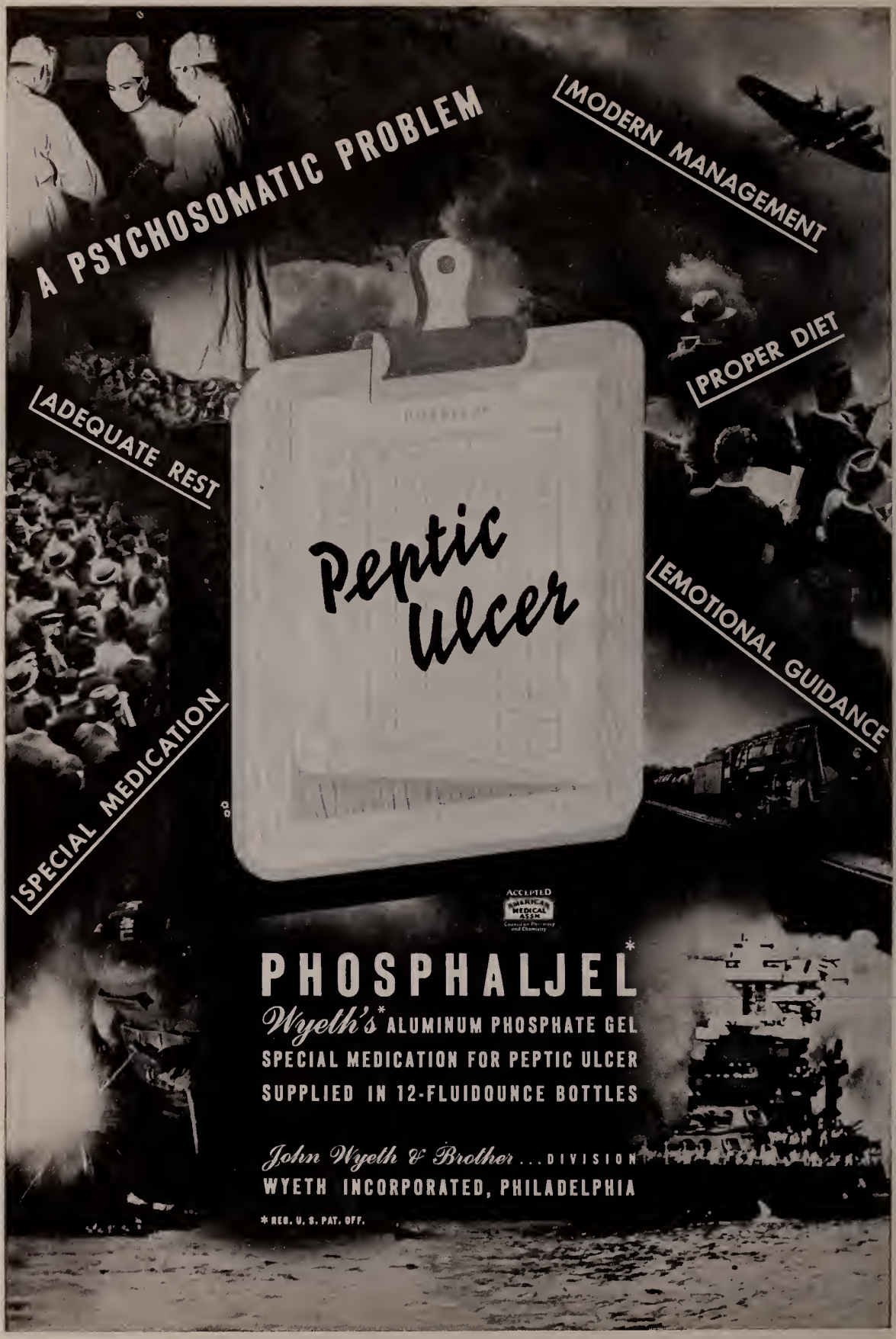
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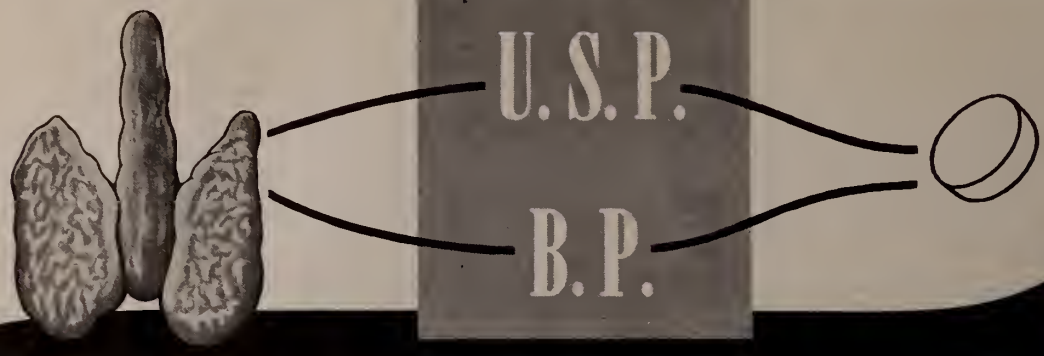
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*Sevringhaus, E. L.: Endocrine Therapy in General Practice, pp. 73-75, The Year Book Publishers, Inc., 1940.

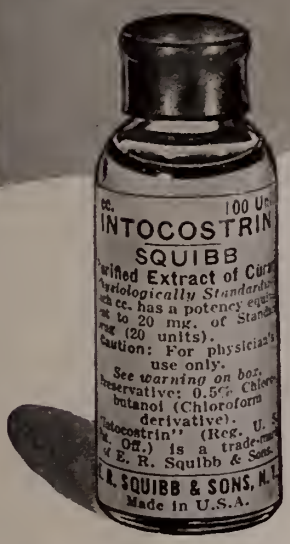
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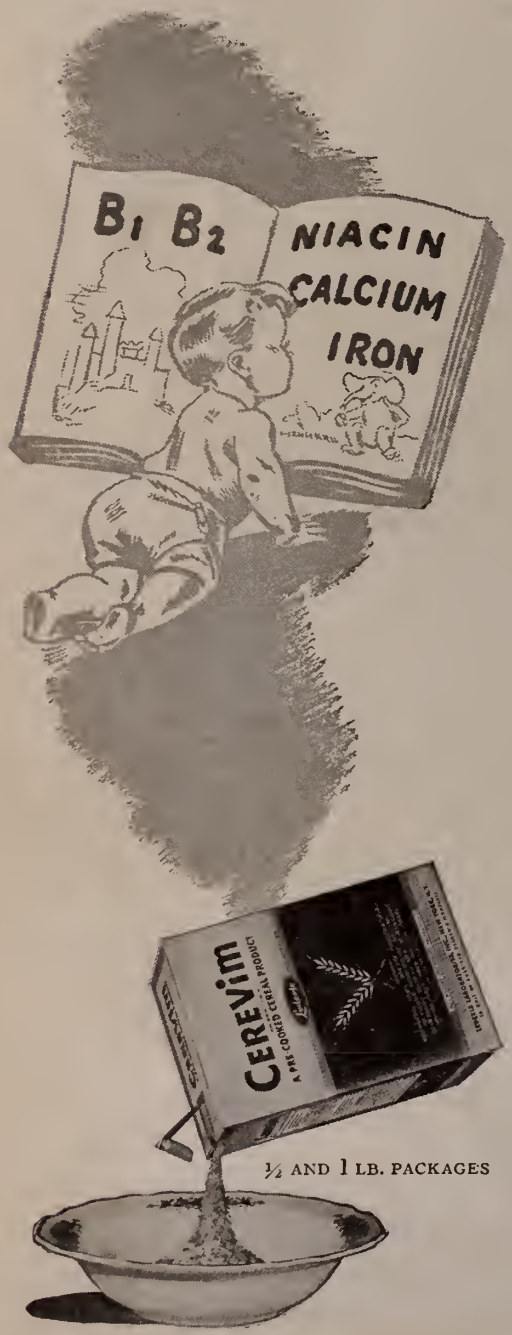
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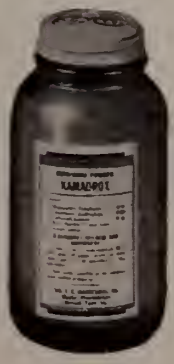
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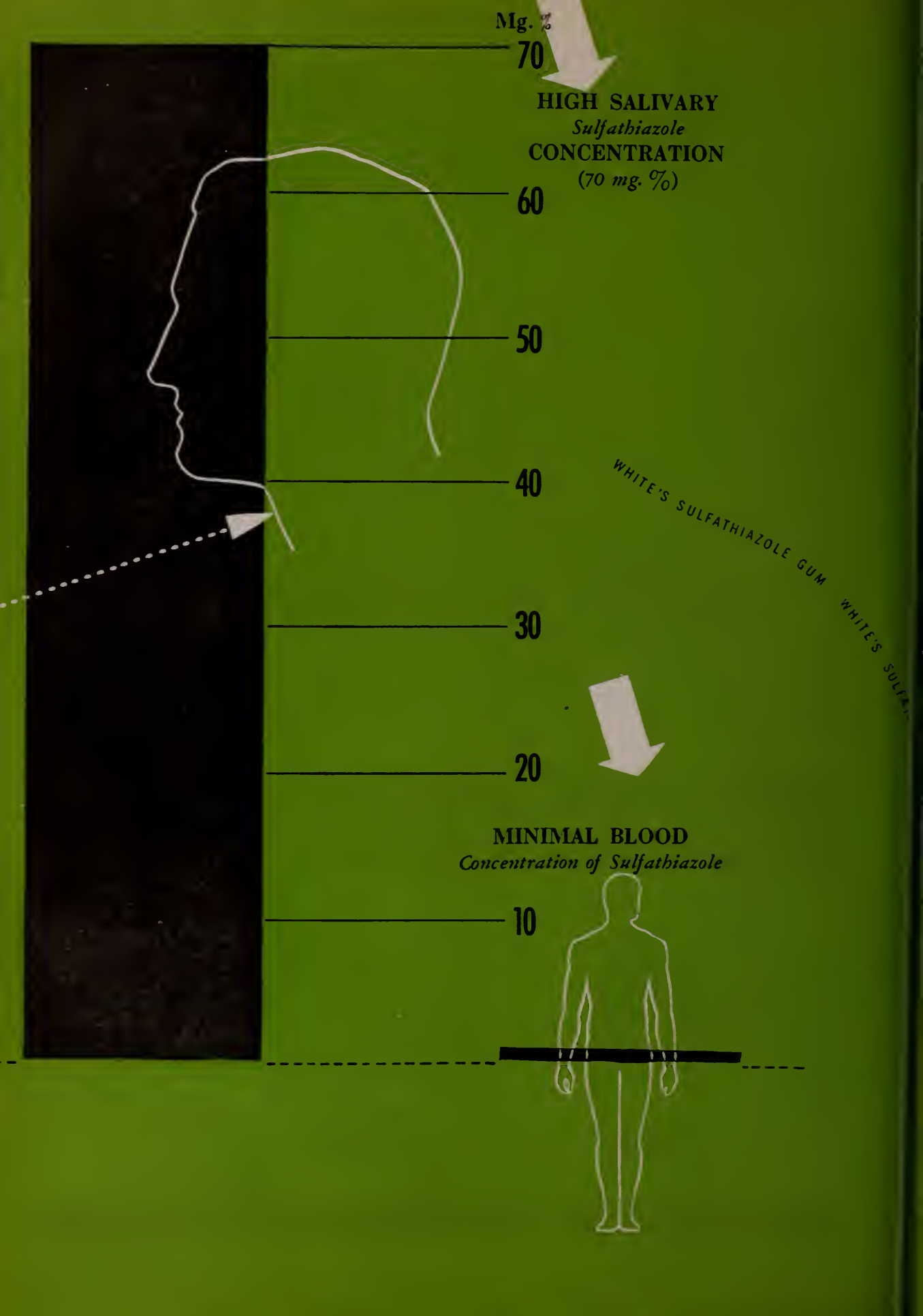
| | |
|---|---|
| Magnesium trisilicate | 4 grains |
| Aluminum hydroxide | 2 grains |
| Colloidal kaolin | 2 grains |

Dose, 1 or 2 tsp. of the powder, well dispersed in water, t.i.d., p.c. Of the tablets, 2 with water, t.i.d. or q.i.d.

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MINIMAL BLOOD
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1 "Notes on Tropical and Exotic Diseases of Naval Importance," issued by U. S. Naval Medical School, National Naval Medical Center, Bethesda, Maryland (Nov. 1942).

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| CALCIUM . . . . | .25 Gm. | 1.104 Gm. | RIBOFLAVIN . . . | .25 mg. | 1.278 mg. |
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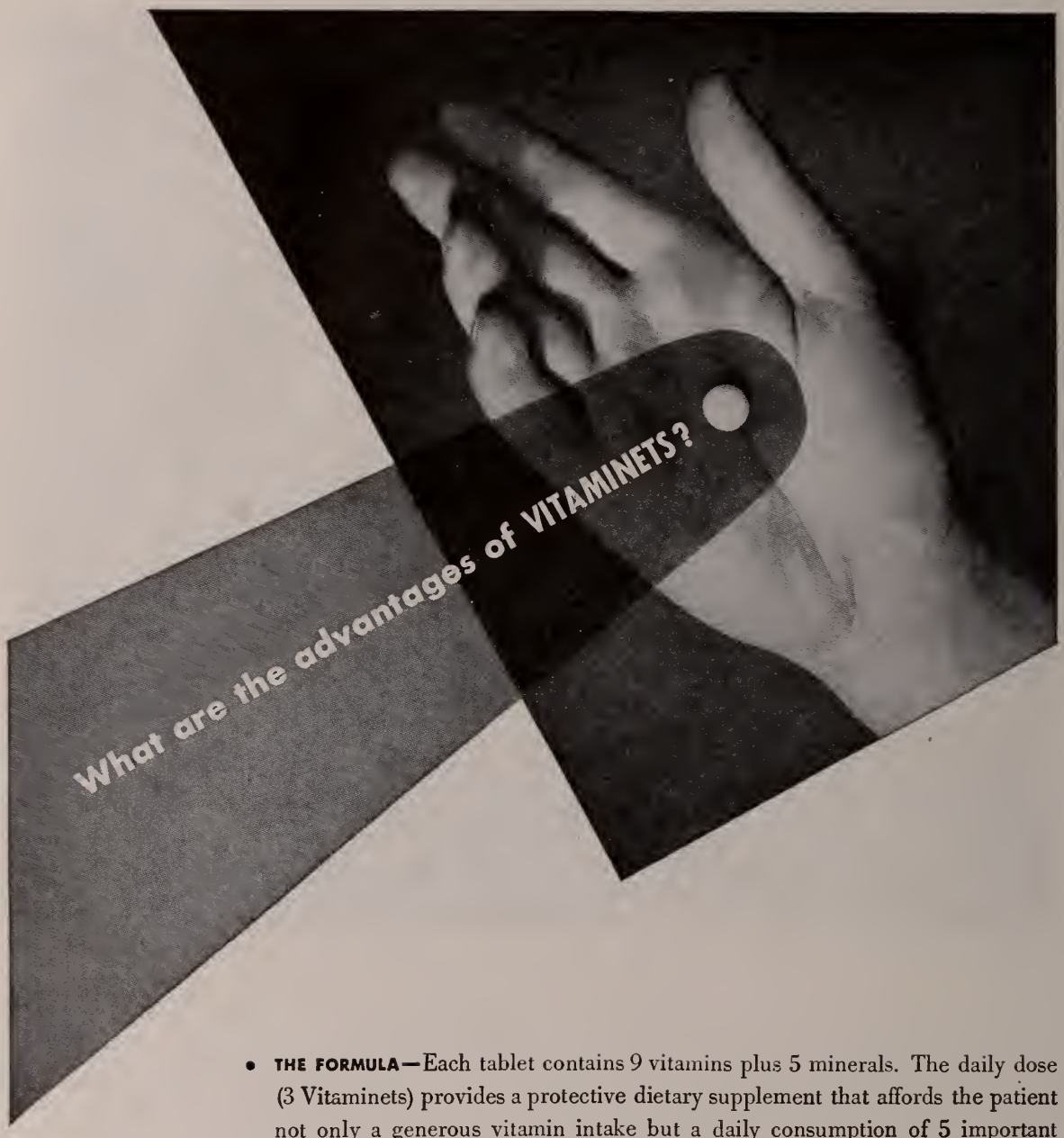
*Each serving made with 8 oz. of milk; based on average reported values for milk.




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1 J. Lab. & Clin. Med., 28:162, 1942. 2. J. A. M. A., 119:615, 1942.

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- **THE FORMULA**—Each tablet contains 9 vitamins plus 5 minerals. The daily dose (3 Vitaminets) provides a protective dietary supplement that affords the patient not only a generous vitamin intake but a daily consumption of 5 important minerals as well.
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# VITAMINETS 'ROCHE'

CONTAINING 9 VITAMINS PLUS 5 MINERALS

Available in bottles of 30 and 100 tablets.

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VOL. 85, NO. 5

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Prescribed For Over A Decade

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Many members of this unique club expect to be present. Andy Hall, as chairman, has arranged a short but interesting program. The Maternal Welfare Committee luncheon will likewise be held at noon on Wednesday and an interesting program has been planned.

The fine array of both technical and scientific exhibits has been arranged to the best advantage in the large exhibition hall of the Palmer House. Time will be made available so that every physician may spend some hours among these interesting exhibits. Great care has been used in the selection of the exhibits and they are always an important part of any medical meeting.

The Woman's Auxiliary has arranged their program which will also be presented at the Palmer House. In addition to the business meetings which must be scheduled, great care has been taken to arrange a schedule for all visiting ladies wich should be an additional incentive for wives of physicians to attend.

The Committee on Arrangements and others who have participated in preparing the programs and other arrangements for the 1944 meeting, urge the members of the Illinois State Medical Society to take time off from a busy practice and attend their own annual meeting.

As usual no registration fee is charged and it is hoped that the attendance will be unusually good this year.

Physicians in the medical corps of the Army, Navy U.S.P.H.S., or other essential war time services, are cordially invited to come to the meeting, register as guests, and participate in the deliberations as freely as they desire.

As all Chicago hotels are crowded daily in war times, it is hoped that everyone intending to be present will have a reservation before arriving in Chicago. However, if any physician finds at the last minute that he can attend the meeting, and does not have a reservation, the Committee on Arrangements at the registration desk will endeavor to find a suitable reservation promptly.

HERE'S HOPING WE SEE YOU AT THE ANNUAL MEETING.


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*Deceased

## IN MEMORIAM

JACOB CARL KRAFFT, M.D., 1874-1944

On March 27, 1944, after a long illness, Doctor Jacob Carl Krafft passed away at his home in Chicago. He graduated from Long Island College of Medicine in 1899, and following his internship, entered into the practice of medicine in Chicago where he remained quite active until compelled to retire on account of illness.

Early in his professional career, he decided to become a pediatrician, and prepared himself for this specialty in medicine by taking post-graduate work in several centers. For many years he was active in the American College of Physicians, having been a charter member of this organization. He was also a member of the American Academy of Pediatrics and was interested in the work of these organizations.

In 1925 at the annual meeting of the Illinois State Medical Society held in Quincy, he was elected as President-Elect. During the following two years he covered the state of Illinois appearing before many county medical societies in his official capacity. He presided at the annual meeting held at Champaign in 1927.

In addition to his work in a number of societies, he held the chair as Clinical Professor of Pediatrics at Loyola University School of Medicine, where he taught for a long period of time.

At the insistence of Doctor Krafft, the Illinois State Medical Society approved the formation of the Committee on Mental Hygiene. Until his death he remained the chairman. For many years he was interested in special legislation to aid the mentally handicapped child. Some two years ago his efforts were successful when such legislation was enacted. He devoted much time and spent a great deal of his personal funds in this work as he felt that with the many plans for helping children handicapped through physical ailments, the many others whose ailments were of mental origin were being neglected.

Although unusually busy with his special work in pediatrics in addition to the several other functions connected with his teaching and his many efforts to assist the mentally handicapped, Doctor Krafft was a regular attendant at the meetings of his own branch society, the Chicago Medical Society, the State Medical Society, and the American Medical Association, (having been a Fellow of that organization for many years).

Once more through the loss of a member who has done much for the organizations whose membership he prized so highly, many members of the Illinois State Medical Society will long cherish the pleasant memories of associations with this highly respected and true physician.

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## THE AMERICAN MEDICAL ASSOCIATION'S WASHINGTON OFFICE

At the last meeting of the House of Delegates of the American Medical Association, many resolutions were introduced by delegates urging the A.M.A. to open a Washington office. This office would make available to legislators or others desiring it, information relative to the work of the Association and its constituent branches, information concerning American medicine, or other data which would be of interest to many in Washington.

By having such an office it was thought that state and county medical societies could get more information on what is going on at the Nation's Capitol. Likewise it would be in keeping with activities of many other organizations and groups which have a Washington office, although not endeavoring to maintain the objectionable "lobbying" activities.

When the A.M.A. House of Delegates met in Chicago last June, the Council on Medical Service and Public Relations was created. Within a short time its policies were outlined and sent to all state medical societies. The state societies were asked to appoint suitable committees to cooperate with the Council, and to request that all county societies select or designate an exisiting committee to assume similiar functions.

When the Council on Medical Service and Public Relations failed to open a Washington office, several groups in different parts of the country organized with the avowed intention of opening such an office in the near future. The Council of the Illinois State Medical Society, after reviewing literature which had been received from these newly organized groups, voted unanimously to take no official action to approve the new organizations. The Council believed that following the next meeting of the A.M.A.

House of Delegates, an official A.M.A. office would probably be established. It was the general opinion that only the American Medical Association could maintain an office to give the best possible service to those public officials and others in Washington desiring authoritative information.

In the Journal of the American Medical Association under date of April 8, 1944, it was officially announced that on April 3rd, a Washington office was opened. The location of the office is Suite 900, Columbia Medical Building, 1835 I Street, N. W., Washington. The Journal of the A.M.A. states: "The office will be under the direction of the Council and the Secretary. In charge for the time being is Joseph S. Lawrence of Albany, N. Y. who has represented the New York State Medical Society in Albany for over twenty years.

"A large number of booklets, pamphlets and other published material are being sent to Washington where they will be readily available to those desiring information concerning the various fields of medicine and the activities of the American Medical Association. The Council will continue its Chicago office as usual, and its semimonthly bulletin will be prepared in that office."

Many Fellows of the American Medical Association will be pleased at this action which was the result of a resolution of the Council on Medical Service and Public Relations. The resolution was unanimously approved by the Council then referred to the A.M.A. Board of Trustees which likewise gave unanimous approval.

For many years a considerable number of physicians throughout the country have believed that the A.M.A. should have an office of information in Washington. They also have urged that a physician be appointed as a member of the President's Cabinet who would have under his supervision all medical activities not directly connected with the services provided for the Army and Navy. Resolutions have been passed repeatedly in the A.M.A. House of Delegates urging that this be done, but to date no legislative enactment has made it possible.

It is quite obvious to all that if a Washington office of information is advisable it should be under direct supervision of the American Medical Association. Every effort should be made to see that it functions properly in giving desired information to legislators and all others desiring it, and also to the medical profession at home. All physicians should be fully informed as to all the proposed legislative activities in the Nation's Capitol which are of general interest to members of the profession.

Our legislators should be thoroughly informed as to the location of the Washington office, its functions, etc. This is the logical place for them to secure adequate information on subjects pertaining not only to the work of the American Medical Association but also concerning problems affecting the health of the American people. Every physician should discuss this movement with his legislators while they are at home so that there will be no doubt that all of them know where they can get the information desired with a minimum of delay.

We believe that this will eventually be one of the major functions of the American Medical Association. Every member of this greatest of all medical organizations should give his hearty approval to the project.

## MEET ARIZONA MEDICINE

Early in January, Arizona Medicine, the Journal of the Arizona State Medical Association, took a bow as the youngest of the official journals of state medical societies. At the present time Arizona Medicine appears bimonthly, and the editor is Dr. Frank J. Milloy, with Drs. J. D. Hamer and D. F. Harbridge as associate editors.

It is a rather unusual undertaking during war times to bring out a new medical journal. The Arizona Society has done a good job, and the Society, as well as those responsible for its editing, deserve much credit indeed.

Arizona Medicine should become a highly popular journal in the southwest, and there is unquestionably a need for such a journal in this large area, in war time.

## PSYCHOLOGY

One of the most revealing comments on human nature (feminine) we've come across in many a day is contained in the little tale about a perfume manufacturer who marketed a fragrance called: "Lady."

Sales lagged, 'til someone had the bright idea of changing the perfume's name, whereupon sales soared. The new name: "Hussy."

*—Printers' Ink.*

# Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

The late John S. Nagel contributed much to the Ilinois State Medical Society. As a member of the council for twenty-six years he took a very active part in all of the transactions of the council.

For a number of years he was interested in the formation of the Illinois State Medical Society Benevolence Fund. His recommendations to the House of Delegates was the creation of this Endowment Fund, and was approved by the House of Delegates four years ago. Following the approval by the House of Delegates Dr. Nagel was made chairman of the committee and he devoted a great deal of his time to the work of this committee and appeared before many of the Woman's Auxiliary Societies to interest them in making contributions to this fund.

Up to the present time their contributions are approximately about $4,000.00 and it is now one of the chief objectives of the Auxiliary.

As a result of Dr. Nagel's work a number of physicians and physicians' widows have been materially helped by this fund. Up to the present time, so far as the writer knows, there have been no contributions by individuals among the profession or other sources outside of the appropriations made by the Illinois State Medical Society from the dues of its members. The thought has occurred to several that it would be fitting and proper to change the name of this Endowment Fund to the Dr. John S. Nagel Endowment Fund of the Illinois State Medical Society, and that through such action many of the life long friends of Dr. Nagel's, both in and out of the profession, might make contributions to the Fund. Inasmuch as it is an economic problem for those who receive benefits from the fund it is mentioned in this column and hoped that serious consideration will be given to the suggestion.

It would be the finest and greatest tribute that we can pay to Dr. Nagel for his life long years of service, and his work in the development and organization of this Fund.

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For the last several years, but particularly in the last few years, there has been criticism of the American Medical Association particularly its Officers and House of Delegates because they have not set-up a plan to be offered the American people in lieu of the plans developed for some form of socialized medicine.

There has been considerable demand for an office in Washington and a number of doctors and some state societies have felt that this office should not be particularly under the supervision of the American Medical Association.

The achievements of the American Medical Association in the last twenty-five years have been outstanding in so many ways that criticism is not wholly justified, and especially the type of criticism that carries no constructive element in it. This does not take any credit away from those organizations that have aided the American Medical Association in their work in a constructive way. The American Medical Association is a democratic organization composed of a House of Delegates, elected by each constituent society, who meet annually to formulate the general policies of the American Medical Association. The Officers and the Board of Trustees can do nothing aside from carrying out the general policies adopted by the House of Delegates. It would seem feasible that if there are certain states who believe the American Medical

Association is not functioning as it should be to meet the many problems of the medical profession that they should discuss that before their own House of Delegates at their annual meeting, and that their delegates to the American Medical Association should be instructed to offer such suggestions or resolutions as the state has determined to be feasible.

There is no organization that can replace or take the place of the American Medical Association. And in the final analysis the American people will look to the American Medical Association as responsible leadership in American medicine. There is evidence that the American people do have confidence in American medicine and certainly the members of the profession should support the American Medical Association to the fullest extent at the present time.

The House of Delegates, Officers and the Trustees of the American Medical Association have recognized that there were changing social and economic problems confronting both the profession and the people, and they have over a period of years approved various plans to meet these changing conditions.

A recent report of the survey made by the National Physicians Committee should be carefully studied by every doctor in the United States because it emphasizes very definitely the present trend, and it equally emphasizes the fact that the American people want American medicine under the leadership of the American doctors which means under the leadership of the American Medical Association.

R. K. Packard, M.D.
Chairman
Committee on Medical Economics.
April 17, 1944.

## INDEFINITE DEFINITIONS

A political plum — one result of careful grafting.—*Anon*

Sitizens — those who are not doing much for the War Effort.—*Liberty.*

Sissy — the guy who quits the O.P.A. to join the Commandos!—*Calgary Herald.*

Wickedness — a myth invented by good people to account for the singular attractiveness of others.—*Hobo News.*

Shot — that which, if some people have more than one, they're half.—*Louisville Courier.*

## REPORTS PENICILLIN EFFECTIVE IN BONE AND BLOOD INFECTION

### Doctor Tells Of Successful Use Of New Drug In Case Of Osteomyelitis And Septicemia Caused By Staphylococcus Albus

The successful treatment with penicillin of a case of infection of a bone (osteomyelitis) and of the blood (septicemia) with Staphylococcus albus is reported in *The Journal of the American Medical Association* for April 8 by O. Charles Ericksen, M.D., Sioux Falls, S. D.

The patient, a white man aged 29, a farmer, was admitted to the McKennan Hospital, Sioux Falls, on Oct. 10, 1943 with the complaints of weakness, chills and fever and also pain in the right hip. Treatment with sulfonamide drugs was without any apparent benefit. On November 4 treatment with penicillin was started, with immediate improvement. Blood cultures taken daily following the inception of the penicillin treatment at no time revealed any bacterial growth. He had some febrile reactions to the penicillin, the temperature, following each injection into a vein, ranging from 102 to 106.4 F., for about one-half hour or so but not preceded by a chill and not causing the patient to feel at all ill. When administration was given by injection into a muscle the temperature at no time was above normal. On November 18 the patient was allowed out of bed and on the following day was sent home. When last seen the following January 4 he said he felt fine and had no complaint whatever.

Commenting on the case Dr. Ericksen says that "I feel that the results obtained, to say the least, were miraculous. The patient improved almost instantly and declared that he had a feeling of well being. The febrile reactions in this case, in all probability, were due to pyrogenic (fever inducing) substances that were in the penicillin. When the penicillin was given intravenously, violent febrile reactions were obtained, but when it was given intramuscularly these febrile reactions did not occur."

★ **BUY AN EXTRA BOND** ★

# PROGRAM

## OF THE

## *One Hundred Fourth Annual Meeting*

## *Illinois State Medical Society*

CHICAGO, ILLINOIS

PALMER HOUSE

MAY 16, 17, 18, 1944

1944 OFFICIAL PROGRAM

# ANNUAL MEETING HEADQUARTERS



## THE PALMER HOUSE

# THE 1944 ANNUAL MEETING

AGAIN this year it has been decided that the Annual Meeting of the Illinois State Medical Society be held in the centrally located and accommodation secure city of Chicago. After another year of the war we are still trying to bring to our members and the visiting doctors from many states that which is new, that which is old and revived, and that which has been tried and found wanting in the medicine of 1944. The General Sessions are packed full of interesting papers by competent men which will be of interest to every medical man attending regardless of his specialty. In these days when the civilian communities are sacrificing so many of their medical men that our boys at the fighting fronts may get the best care that modern medicine can bring, we who are in the specialties must avail ourselves of every opportunity to be doctors in the real sense of the word, ready for any emergency which might arise. The program this year has been planned with this in mind.

Each committee has put in many hours and written many letters and made many telephone calls that the convention may move along smoothly with each department interlocking with the others to make one harmonious whole.

The Scientific Exhibits this year seem to be more complete and indivually finished than ever before and to the exhibitors is a credit that can be accorded in value only by those who have at some time gone through the agonies of preparation of such an exhibit. The Commercial Exhibits are large in number, well selected and have a very definite value to every attending medical man. See them and study their presentations.

Our meeting place is the same as last year as the management made such a completely successful effort to supply the needs of a great convention as only can be done by a hotel with the unlimited experience in anticipating the wants of its guests and visitors. We are happy to again meet at the Palmer House.

We predict that there will be a very large attendance at the convention in spite of the large number of our members who are out of the range of such a meeting. We also predict that any one who gives his time to attend will not only go away refreshed medically but will have a rest from his own labors which will do him untold good in the year that presses ahead.

*Harry M. Hedge, M. D.*

General Chairman, Committee on Arrangements

# General Sessions

**TUESDAY AFTERNOON, MAY 16, 1944**
**GRAND BALLROOM**

**OPENING MEETING**

1:00 Meeting Officially Opened by the President.
Invocation — Clifford H. Newham, D.D., Minister Covenant Methodist Church, Evanston.
Address of Welcome — Hon. Edward J. Kelly, Mayor, Chicago.
Address of Welcome — Oscar Hawkinson, President, Chicago Medical Society, Chicago.
Report of Chairman Committee on Arrangements — Harry M. Hedge, Chicago.
Adjournment for Scientific Meetings.

**TUESDAY EVENING, MAY 16, 1944**
**RED LACQUER ROOM**

9:00 Oration in Medicine — "The Evolution of Our Knowledge of Coronary Heart Disease"
Paul Dudley White, Massachusetts General Hospital, Boston.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

11:15 Oration in Surgery — "Progress in the Army Medical Service"
Brigadier General Fred W. Rankin, Office of the Surgeon General, Washington, D. C.

**THURSDAY MORNING, MAY 18, 1944**
**RED LACQUER ROOM**

Induction of the President-Elect

Immediately following the completion of the second session of the House of Delegates, the President-Elect Everett P. Coleman, Canton, will be inducted into the office of President of the Illinois State Medical Society. All members and guests at the meeting are invited to attend this function.

# Joint Sessions

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session of Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

Chemotherapy

9:00 "Surgical Indications"
Karl A. Meyer, Chicago.

"Medical Indications"
A. E. Brown, Mayo Clinic, Rochester, Minnesota.

"Present Day Status of Veneral Disease Control and Treatments"
A. J. Aselmeyer, (USPHS) Chicago.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**GRAND BALLROOM**

# CLINICO PATHOLOGICAL CONFERENCE

1:30 p.m. to 2:30 p.m.
In charge of Samuel Levinson, Chicago.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**PRIVATE DINING ROOM 14**

Joint Session of Sections on Public Health and Hygiene, Obstetrics and Gynecology and Pediatrics.

2:30 "Problems in the Care of the New Born"
Eugene T. McEnery, Chicago.

"A Review of Old and Modern Treatment of Asphyxia Neonatorum"
Isaac A. Abt, Chicago.

There are old records that indicate that asphyxia of the newborn baby was treated by immersion in cold water, or the reflexes were stimulated by smacking of the buttocks or slapping the body, or by brushing or rubbing the surface of the skin.

In Rumania when a child was deeply asphyxiated, it was allowed to smell or inhale the smoke from a piece of burning cloth, whereupon it began to sneeze. Another procedure was to carry the infant to a bath at the church. Bathing in hot or cold water was a favorite method. Stimulation of the body with spiritous liquids, the application of stimulants to the nostrils such as ammonia, rectal injections of warm water, and attempts to inflate the lungs by forcing air through the nostrils or by mouth to mouth breathing were other practices.

In the older treatment emetics were employed, or one or two teaspoons of blood were allowed to ooze from the umbilical cord before ligating. Other methods of reflex stimulation will be cited. The various methods of artificial respiration will be referred to — those of Marshall Hall, Sylvester, Laborde and others, (including Schultze's swingings) and also mechanical devices which were used in the nineteenth century.

The approved modern treatment will be given in detail.

"Tuberculosis — A New Post-War Public Health Problem"
E. A. Piszczek, Chicago.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session of Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

9:00 "Pathologic Basis for Clinical Manifestations in Nephritis"
J. P. Simonds, Chicago.

"Continuous Caudal Anesthesia"
"Robert A. Hingson and Waldo B. Edwards, Philadelphia.

The Influence of Continuous Caudal Analgesia Upon the Mature and Premature Baby Throughout Labor, Delivery, and Immediately After Birth.

Concurrent with the study of this technique upon the parturient should follow the study of the physiological and pharmacological effect upon the baby. These studies have been initiated in regards to the alterations in heart rate of the infant throughout labor, the transmigration of the local anesthetics through the placenta, chemical assay of amniotic fluids, fetal urine, and cord blood. Alterations in uterine tone and contractions under continuous caudal analgesia produce a new environment for the unborn baby. The softening of the lower uterine segment and perineum present added factors of safety for the baby. Timing of the first spontaneous breath and lusty cry of the baby after birth under caudal and under various forms of amnesia and anesthesia in large parallel series has been performed. Implications of safety for the premature baby are presented.

"Exotic Diseases as Present in Post War Health Problems"

L. F. Badger, Senior Surgeon and Assistant Director of the National Institute of Health, Washington, D. C.

The entrance of new diseases into this country by members of the armed forces who are fighting in the various battle-fronts throughout the world will present a problem to the medical practitioner of not only diagnosis but also in the newer methods of treatment in these diseases.

The change in medical practice brought on by this war will be primarily in the increase in knowledge about these tropical diseases.

## MEETINGS OF THE HOUSE OF DELEGATES

### TUESDAY AFTERNOON, MAY 16, 1944
### FOYER OF THE GRAND BALLROOM

3:00 The first meeting of the House of Delegates called to order by the Acting President, Robert S. Berghoff, for Reports of Officers, Councilors, Committees, Appointment of Reference Committees, Introduction of Resolutions, and for the transaction of other business which may come before the House.

### THURSDAY MORNING, MAY 18, 1944
### RED LACQUER ROOM

9:00 The Second meeting of the House of Delegates called to order by the President for the Election of Officers, Councilors, Committees, Delegates and Alternates to the American Medical Association, Reports of Reference Committees and action on same, action on Resolutions, and for the transaction of other business to come before the House.

# *Section Programs*

## SECTION ON MEDICINE

G. B. Stericker ..... Chairman
Laurence E. Hines ..... Secretary

### TUESDAY AFTERNOON, MAY 16, 1944
### GRAND BALLROOM

2:00- 5:00 p.m.

"Histoplasmosis"

William A. Thomas, Chicago.

Working among the natives of Panama, Darling in 1905 reasoned that in that part of the world there should be a disease similar to Kala-azar existing in similar climates in the old world. Investigation proved this to be correct and he found in the organs of these natives round or ovoid bodies occurring in enormous numbers, naming the organism Histoplasma Capsulatum.

It resembles the Leishman-Donovan body with the exception that it contains no chromaffin rods. About fifty cases have been reported, though many more have been recognized in this country. A case report concerns an elderly woman in whom the disease was diagnosed ante-mortem by stained sections, macerated material, and cultures, obtained by biopsy from nodular cutaneous lesions.

"Tuberculosis in War Time"

Maxim Pollak, Peoria.

"Management of Infectious Diseases of the Colon"

M. H. Streicher, Chicago.

Clinical progress, symptomatic improvement and therapeutic measures were studied in about 200 patients with infectious diseases of the colon. The group includes cases of Bacillary Dysentery, amebiasis and chronic ulcerative colitis and outlines briefly therapeutic measures, clinical results and criteria of prognosis. We present evidence of results of the use of sulfasuxidine, and a new sulfonamide, sulfathalidine.

"Medical Management of Biliary Tract Disease"

Ralph E. Dolkart, Chicago.

"Sulfamerazine"

Italo F. Voline, Gertrude M. Engbring and Hildegard Schorsch, Chicago.

Sulfamerazine rapidly absorbed from the gastro intestinal tract showing approximately the maximum concentration in the blood from four to six hours after the ingestion of a single dose, orally, of the drug. This blood level is attained on the average of one-half to one-third the dose of sulfadiazine. The blood level is maintained in most instances by less frequent administration of sulfamerazine than sulfadiazine, such as six and eight hour intervals. The degree of blood acetylation is ten to fifteen percent, but the conjugation in the urine is very high, from 65 to 90 percent. The drug in the blood serum is found to be four or five times the concentration in the cells. The drug diffuses readily and was found in the cerebral spinal fluid, pleural exudate, gastric juice, perspiration. Clinical experience in 124 patients is analyzed.

### WEDNESDAY MORNING, MAY 17, 1944
### GRAND BALLROOM

Joint Session with Sections on Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

For Complete Program See Joint Sessions.

### WEDNESDAY AFTERNOON, MAY 17, 1944
### GRAND BALLROOM

2:00- 5:00 p.m.

Chairman's Address: "Gold Therapy in Rheumatoid Arthritis"

G. B. Stericker, Springfield.

"Malaria"

Major P. L. Shallenberger, M.C., Gardiner General Hospital, Chicago.

(1) Diagnosis. Importance of finding parasites in blood stream. History of parasitemia and therapeutic tests.

(2) Various drugs used in therapy; relative efficiency and indications.

(3) Recurring attacks. Slides showing the atypical and typical repeated attacks and severity and treatment.

(4) Immunity. A short discussion of the development of immunity from individual attacks and from multiple attacks; immunity to cross infection; problems of permanent immunity; producing of immunity after infection.

"The Effects of Drugs on the Electrocardiogram"

J. Roscoe Miller and Theodore R. Van Dellen, Chicago.

In this paper we will present the effects of calcium, potassium, magnesium, digitalis, quinidine, the barbiturates, mercurial diuretics and dilantine of the electrocardiogram of both dogs and man. The physiology of such changes will be shown to demonstrate this study.

"Neurological Symptoms of Infectious Mononucleosis"

Thomas J. Coogan, Donald L. Martinson and Wallace H. Mathews, Chicago.

### THURSDAY MORNING, MAY 18, 1944
### GRAND BALLROOM

Joint Session with Sections on Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

For Complete Program See Joint Sessions.

# SECTION ON SURGERY

J. S. Lundholm ..... Chairman
G. E. Johnson ..... Secretary

### TUESDAY AFTERNOON, MAY 16, 1944
### RED LACQUER ROOM

Joint Session with Central States Society of Industrial Medicine and Surgery.

2:00 "The Acute Abdomen"
Andy Hall and A. W. Modert, Mount Vernon.
Discussion: Everett P. Coleman, Canton.

2:30 "Cancer of the Lip"
D. B. Freeman, Moline.

The cure of cancer of the lip is largely dependent on early detection and diagnosis since the early cases are most readily cured. Both of these factors, that is, the early diagnosis and detection, should be possible in this type of cancer in practically every case. The primary effort should be to clear all of the area involved, of the cancerous process — this regardless of the deformity produced — the mode of treatment depending on how far the cancer has progressed. Not one method alone is sufficient, but a combination of local treatment, cautery, surgery and radiation — whatever is necessary to destroy the cancerous process. Then later, repair the deformity produced in the destruction of the cancer.

A short movie follows to illustrate a few of the cases treated.

Discussion: Robert Baird, Dixon.

3:00 "Surgical Method for Correction of Vesico-Vaginal Fistula"
Chester W. Trowbridge, Oak Park.

Certain types of vesico-vaginal fistula and inaccessable through the vaginal route, and the following technique has been devised: insertion of a catheter into the vagina through the fistula up to a ball of gauze which has previously been fixed to the catheter, superpubic opening of the bladder, excision of the fistula's tract down to the ball of gauze, inversion of vaginal mucosa, approximation of muscalaris and inversion of the bladder mucosa constitutes the important steps of the technique I propose offering.

3:30 "Treatment of Hip Fractures"
Robert J. Hyslop, Freeport.

Fractures in and about the hip joint because of the hazard to the lives of the aged and their frequency, have received extensive consideration in the past ten years. Early in that period most emphasis was placed on the neck fractures and only more recently the trochanteric types. The problems and principles of the neck fractures have been greatly clarified and the treatment has been quite generally accepted.

Trochantric fractures generally have been considered less serious, less common in occurrence, non-union non-existent and easier to treat. On closer study these are not the facts, as I shall hope to substantiate. The treatment of trochaneric fractures in principle has been established but the method has not been as well standardized.

The treatment of neck fractures in the past ten years has been well established. Practically all authorities agree that some type of internal fixation offers the best in treatment as to result, mortality and comfort to the patient.

The type and method of internal fixation is an individual choice and comments are made on 110 cases of hip fracture treated.

Discussion: Rudolph Mroz, Rockford.

4:00 "Advantages and Limitations of Skeletal Fixation Methods for Fractures"
Manley A. Page, Chicago.

The purpose of this paper is to review briefly the results reported in the literature following skeletal fixation of fractures, and to compare these results with other methods of treatment of similar fractures. Slides of a few illustrative cases and comments from personal experience will be made. An attempt will be made to present an unbiased editorial comment on the subject. The paper will be as brief as possible in order to permit adequate time for a full general discussion.

Discussion: E. W. Ryerson, Chicago.

4:30 "Low Back Pain"
J. B. Moore, Benton.

### WEDNESDAY MORNING, MAY 17, 1944
### GRAND BALLROOM

Joint Session with Sections on Medicine, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

For Complete Program see Joint Sessions.

### WEDNESDAY AFTERNOON, MAY 17, 1944
### RED LACQUER ROOM

2:00 "War Plant Surgery"
H. P. McCuistion, Alton.

This paper is intended as a presentation of surgical cases handled in a war plant of apprixmately 13,000 employees. There is nothing unusual about the type of cases or the manner in which it was handled. We do feel that our results have been good. 138,426 persons passed through the Medical Department receiving 175,548 treatments. Handicapped persons are employed, but luetics are barred.

Lacerations and abrasions are treated with soap, water and sulfanilamide powder with what we believe a low percentage of resulting infection.

There were 176 hospital admissions which included the following: lacerations, low back injuries, fractures, amputations, skin grafting, hernia repairs, burns, and two deaths. Some outstanding cases will be presented in detail.

2:30 "Chest Injuries"
Willard Van Hazel, Chicago.

3:00 "Venous Thrombosis and Pulmonary Embolism"
Geza de Takats, Chicago.

The majority of venous thromboses producing clinical symptoms occur in the lower extremities. The incidence of such thrombi is much higher that ordinarily assumed. Their early clinical recognition and adequate treatment is discussed. The relative merits of paravertebral block, vein ligation proximal to the clot and the use of anticoagulants is discussed. The emergency treatment of pulmonary embolism is outlined. The recurrent type of pulmonary infarcts is described.

3:30 "Penicillin Therapy in Meningitis, Secondary to Basal Skull Fracture"
Major Kenneth P. Johnston, M.C., Camp Grant.
Discussion: Major John E. Romano, M.C., Camp Grant.

4:00 "War Surgery in the Navy"
Commander Harry Huston, MC-V (S), USNR, Chief of Surgical Service, United States Naval Hospital, Great Lakes.
(Recently returned from two years' service in the Pacific.)

### THURSDAY MORNING, MAY 18, 1944
### GRAND BALLROOM

Joint Session with Sections on Medicine, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology, and Pathology.

For Complete Program See Joint Sessions.

# SECTION ON EYE, EAR, NOSE AND THROAT

George H. Woodruff ..... Chairman
*Sanford N. Gifford ..... Secretary
Beulah Cushman ..... Acting Secretary

*Deceased

### TUESDAY MORNING, MAY 16, 1944
### CRYSTAL ROOM

9:00 "Allergic Nature of Iritis"
Louis Bothman, Chicago.

Cases of Iritis which have been thoroughly studied for focal infections, many of which had foci removed, continued to have recurrent attacks of Iritis in one or both eyes.

These cases were tested by competent allergists for possible sensitivity. All of them gave positive histories or positive skin tests or both. Most of them had either food allergies or marked sensitivity to molds or both.

Discussion ..... B. Z. Rappaport, Chicago

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9:30 "Lid Edema"
Martha Rubin-Folk, Chicago

1. Edema of the lid is only a symptom, but it occurs so frequently and is so conspicuous that it is well worth while reviewing a few etiologic facts which contribute to this condition.

2. There are many factors that tend to cause lid edema. However, this article is being limited to only two of the causes; namely thrombophlebitis of a vein in the vicinity of the lid, and secondly, by contact infection of the soft tissue which is adjacent to the bone.

Discussion ..... Hans Brunner, Chicago

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10:00 "Some Reasons for Discomfort in Refractions"
Ralph H. Woods, La Salle

Failure to balance Accommodation and Convergence for eye workers.

Failure to determine the amplitude of accommodation in premature presbyopic states.

Failure to analyse each optical product before delivery to patient, ie, spotting axes, spotting centers, resulting in an induced cyclophoria and undesired prism effects.

Failure to measure the pupilary distance on the visual line (physiological P.D.) with vision fixed at the desired reading distance.

Discussion .... A. H. Pember, Janesville, Wisconsin

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10:30 "Sphenoid Sinus Drainage"
O. E. Van Alyea, Chicago.

Phinologists commonly overlook or neglect the sphenoid when undertaking a sinus investigation. This is due, no doubt, to the apparent remoteness of the cavity, the rather vague symptoms which characterize sphenoid sinus disease and the apparent inaccessibility of the sphenoid ostium.

An effort will be made in this paper to simplify the diagnosis and treatment of this extremely important cavity.

Discussion ..... Maurice F. Snitman, Chicago

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11:00 "Sinusitis in Children"
Glenn Greenwood, Chicago.

Infections of the nose and nasopharynx elicit varying degrees of involvement in the nasal accessory sinuses.

General predisposing factors, as the common cold, upper respiratory infections, acute exanthemata, are materially aided by local obstructive and allergic states. Organisms usually are those of the exciting infection.

Effective management, both general and local, aims at restoration along physiological lines.

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## TUESDAY AFTERNOON, MAY 16, 1944
## CRYSTAL ROOM

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2:00 "Laryngeal Emergencies Including Bulbar Poliomyelitis"
Thomas Galloway, Evanston.

3:30 "Nasal Medication"
Noah D. Fabricant, Chicago.

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## ROOM NO. 788

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2:00 "Examination of Strabismus Patients with Indications for Treatment"
George Guibor and Arthur Strich, Chicago.

3:30 "Plastic Procedures About the Eyes"
Irving Puntenney, Chicago.

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## TUESDAY EVENING, MAY 16, 1944
## CRYSTAL ROOM

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6:00 Section Banquet
"Reminiscences" — H. W. Woodruff, Joliet.

## WEDNESDAY MORNING, MAY 17, 1944
## CRYSTAL ROOM

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9:00 "Ocular Proptosis"
Edgar A. Thacker, Urbana.

Ocular Proptosis is considered from the view point of primary origin — that is — from systemic disease and metastasis from lesions in distant parts of the body, paranasal sinuses and skull, intracranial lesions, and disorders in the orbit and its adnexa.

Differential diagnosis, prognosis and treatment of exophthalmos resulting from various causes are discussed.

Presentation is to be made of cases of meningioma, cholestiatoma of the orbit and skull, lymphosarcoma, and extension of malignancy of sinuses into the orbit.

Discussion.

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9:30 "Ocular Brucellosis"
A. C. Krause, Chicago.

Brucellosis is a widespread disease which at times may give rise to internal inflammatory lesions in the eye. In cases of iridocyclitis, choroiditis and iritis of unknown etiology, brucellosis must be considered.

The diagnosis and treatment of ocular brucellosis is extremely difficult.

Discussion.

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10:00 "Carcinoma of the Larynx; Present Concepts of"
Paul H. Holinger, Chicago.

This paper will consist of an evaluation of diagnostic and therapeutic procedures used in the management of carcinoma of the larynx. The history, gross appearance of the lesion, roentgen findings, and the influence of the histology of the tumor in the choice of therapy will be discussed. Recent advances in surgical technics will be illustrated.

Discussion ..... T. C. Galloway, Evanston

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10:30 "Newer Therapeutic Procedure in Carcinoma of the Maxillary Sinus"
Maurice F. Snitman, Chicago.

Brief review of present methods of treatment of sinus cancer; experience and results with fractionated protracted external irradiation with intracavitary radiation and some form of surgery; evaluation compared with other procedures hitherto employed.

Discussion ..... Danley P. Slaughter, Chicago

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11:00 "Management of Chronic Purulent Otitis with Fistula Symptom"
M. Tamari and L. Hirsch, Chicago.

Conservative therapeutic efforts in chronic middle ear suppurations with positive fistula symptom test have little chance to improve or heal completely despite the present use of local or general chemotherapy. Once a diagnosis of a circumscribed labyrinthitis in chronic middle ear suppuration is made, a radical surgical procedure is indicated. There will be case reports of preoperative and postoperative symptoms and discussion of the management in cases treated in the last two years at the Illinois Eye and Ear Infirmary. Microphotographs will demonstrate some stages of pathologic fistulas in the labyrinthic wall.

Discussion ..... H. T. Nash, Chicago

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11:30 Business Meeting

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## WEDNESDAY AFTERNOON, MAY 17, 1944
## CRYSTAL ROOM

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2:00 "Experimental Fenestration on the Labyrinth and its Bearing on the Fenestration Operation"
George Shambaugh, Chicago.

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## ROOM NO. 788

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2:00 "The More Common Lacrimal Problems"
Harold Gifford, Omaha, Nebraska.

# SECTION OF PUBLIC HEALTH AND HYGIENE

Roland R. Cross ..... Chairman
E. A. Piszczek ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**PRIVATE DINING ROOM 18**

**Theme: POST-WAR PUBLIC HEALTH SERVICE**

2:30 "Development of County Health Departments"
Richard F. Boyd, Director, Local Health Administration, Illinois Department of Public Health, Springfield.

The enactment of a county health law by the last General Assembly represents a most important advancement in Public Health in Illinois. This law permits counties to establish and maintain locally autonomous health departments. In order to adequately meet Public Health needs in the State, approximately 59 such health departments will be needed; 27 of which will consist of single counties and 32 of multiple counties. These health departments must be adequately staffed with Health Officers, Public Health Nurses, Sanitation Officers and Stenographers.

The county health departments will carry out generalized public health programs in the field of communicable disease control, venereal disease control, tuberculosis control, maternal and child health, sanitation and health education.

3:00 "Mental Ills as a Post-War Public Health Problem"
Conrad Sommer, Deputy Director, Mental Hygiene Service, Illinois Department of Public Welfare, Chicago.

One-third of all Selective Service rejections and forty-five percent of the medical discharges from the armed services are for neuropsychiatric reasons. The guiding principal in neuropsychiatric rehabilitation shall be to make patients with such defects self-supporting, through minimal hospital treatment when necessary for both psychotics and neurotics, extramural psychiatry, vocational guidance and rehabilitation.

3:30 "Public Health Aspects of Tropical Diseases"
L. F. Badger, Senior Surgeon and Assistant Director of the National Institute of Health, Washington, D. C.

The entrance of hundreds of thousands of Illinois soldiers into tropical areas during time of war, and their possible exposure to tropical diseases, and the return of soldiers into this area from the tropics brings up a post-war consideration of the possibility of universal spread of these diseases in the state of Illinois.

4:15 "Maternal and Child Hygiene"
Hugo V. Hullerman, Chief, Division of Maternal and Child Hygiene, Illinois Department of Public Health, Springfield.

The improvement of infant and maternal morbidity and mortality in the state of Illinois can be accomplished by providing more adequate facilities and qualified personnel as required under the Illinois Maternity Hospital licensing laws. Establishment of antepartum clinics and child conferences in areas of need plus the development of statewide prenatal programs and the availability of breast milk will help to reduce greatly the infant mortality. The better education of mothers through Mothers' Classes and maternity exhibits will also aid in this work.

The improvement and protection of infant and child health through institution of immunization programs, school and pre-school physical examinations and teaching of adequate nutrition is important. The availability of serum and plasma in all maternity hospitals will aid tremendously in the reduction of mortalities from post-partum hemorrhages. A discussion of the present and post-war maternal and infant hygiene problems.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

For Complete Program See Joint Sessions.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**PRIVATE DINING ROOM NO. 14**

Joint Session with Sections on Pediatrics and Obstetrics & Gynecology.

For Complete Program See Joint Sessions.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Radiology, Pediatrics, Obstetrics and Gynecology and Pathology.

For Complete Program See Joint Sessions.

# SECTION ON RADIOLOGY

Fay H. Squire ..... Chairman
P. R. Dirkse ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 9**

2:00- 5.00 p.m.
"Recent Trends in the Treatment of Cancer"
Roswell T. Pettit, Ottawa.

Out of the vast amount of experimentation on such diverse subjects as hereditary, biology, pathology, metabolism, chemistry, physics, viruses and hormones has come an abundance of information about cancer that can be used in the only two known and recognized fields of treatment — surgery and radiation.

With increasing knowledge, surgery and radiation in the treatment of cancer are in a continuous state of flux, and properly so.

In this paper an analysis of present trends in the use of x-ray and radium will be made.

"Radiation Therapy of Chronic Leukemia"
T. C. Clement, Peoria.

A brief resume of the various types of leukemia, together with the clinical characteristics of the disease and the laboratory differential diagnoses, will be discussed.

The sensitivity of the circulating cells to rays of short wave length and the changes that therapy may produce in the blood forming organs will be considered. Consideration will also be given to the possibility that radiation therapy may produce a change in the type of leukemia.

A plea for the minimal amount of therapy consistant with the control of the disease will again be emphasized.

"Value of Spot Films in the Radiography of the Gastro-intestinal Tract"
Frank L. Hussey, Chicago.

The author will evaluate various forms of fluorographic technique in the diagnosis of various types of lesions of the entire gastro-intestinal tract. Particular emphasis will be placed upon instant film exposures during fluoroscopy.

"Silicosis of the Lungs with Differential Diagnosis from Other Diseases"
Harold E. Davis, Chicago.

A brief discussion of the etiology and the theories of the pathology of silicosis will be presented followed by a simplified classification of silicosis. The differential diagnosis will be given, discussing the more common lesions which may apparently simulate silicosis. A considerable series of specimen chest films will be shown to demonstrate the various points and especially to illustrate non-silicotic lesions which may simulate silicosis.

**TUESDAY EVENING, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 6**

6:00 Annual dinner.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery,

Public Health and Hygiene, Pediatrics, Obstetrics and Gynecology and Pathology.

For Complete Program See Joint Sessions.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Pediatrics, Obstetrics and Gynecology and Pathology.

For Complete Program See Joint Sessions.

## SECTION ON OBSTETRICS AND GYNECOLOGY

C. J. Heiberger ..... Chairman
J. P. Greenhill ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**PRIVATE DINING ROOM 14**

2:00- 5:00 p.m.

"Carcinoma of the Body of the Uterus"
Herbert E. Schmitz, Chicago.

The preliminary spatting which occurs in the menopausal period or post-menopausal period of life would be sufficient to arouse the suspicion of malignancy. In the presence of such symptoms, negative palpitory findings should not lead to a feeling of security on the part of the physician, but should indicate a more thorough work-up.

The diagnostic measures which would further an early diagnosis will be discussed and the importance of a careful dilatation and curettage will be stressed. The treatment of this condition will have a two-fold aspect, in that the value of radiation therapy and the surgical aspects will be thoroughly treated.

"Changes Produced by Radiation in Uterine Carcinomas and in the Uterus Itself"
John F. Sheehan, Chicago.

In therapeutic doses, radiation induces morphological changes in squamous cell carcinomas of the uterus, as well as in many adenocarcinomas. These changes include swelling of cytoplasm and nuclei, hyperchromatism of nuclei, abnormal mitoses, nuclear gigantism, multinucleation, degeneration and necrosis. With the higher doses of radiation some changes are produced in the uterine wall itself — atrophy or necrosis of the endometrium, hyalinization and atrophy of partions of the myometrium and a variety of vascular changes. In areas superficial necrosis of the myometrium adjacent to the endometrium also may occur, particularly when intrauterine radium is used.

"The Challenge of the Eclamptogenic Toxemia"
Frederick H. Falls, Chicago.

Recent experience in handling of eclamptogenic toxemia has shown that the disease can be controlled almost completely in the overwhelming majority of cases.

In this discussion the different types of eclamptogenic toxemias are pointed out. The pathogenesis and pathology are described and a rational method of treatment is based on these concepts. A resume of the results obtained from the handling of 1200 cases of eclamptogenic toxemia are evaluated. The results obtained by the active aggressive management of these cases are contrasted with the more conservative types of management, and the decrease in fetal and maternal mortality in these cases over a period of the last ten years is discussed.

"A Statistical Study of the Obstetric Activities in Illinois Hospitals During 1943"
Charles H. Newberger, Chicago.

Data compiled from monthly reports received from Illinois hospitals by the Division of Maternal and Child Hygiene of the Illinois State Department of Public Health, giving number of spontaneous and operative deliveries, the types of operations, the incidence and type of obstetric complications, and the maternal and fetal mortality.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Pediatrics and Pathology.

For Complete Program See Joint Sessions.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Public Health and Hygiene and Pediatrics.

For Complete Program See Joint Sessions.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Pediatrics and Pathology.

## SECTION ON PEDIATRICS

Robert Cummings ..... Chairman
John F. Carey ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**PRIVATE DINING ROOM 17**

**SYMPOSIUM ON RHEUMATIC FEVER**

2:00-5:00 p.m.

"Rheumatic Fever as a Public Health Problem"
Jerome J. Sievers, Springfield.
Discussion opened by Robert A. Black, Chicago.

"Rheumatic Fever in Childhood"
H. W. Elghammer, Chicago.
Discussion opened by Gerald Cline, Bloomington.

"Rheumatic Heart Disease"
Stanley Gibson, Chicago.

Rheumatic heart disease is extremely variable in its manifestations. In one instance the heart valves bear the brunt of the attack, in another the myocardium, and in still another the pericardium is markedly involved. There is in many cases, some correlation between the nature and severity of the cardiac injury and the associated rheumatic phenomena. Thus the heart disease following chorea is likely to be distinctly different from that which occurs following joint pains, and again different in those who exhibit rheumatic nodules.

Discussion opened by W. L. Crawford, Rockford.

"Treatment of the Rheumatic Syndrome"
"Philip Rosenblum, Chicago.
Discussion opened by S. C. Henn, Chicago.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Obstetrics and Gynecology and Pathology.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**PRIVATE DINING ROOM 14**

Joint Session with Sections on Public Health and Hygiene and Obstetrics and Gynecology.

For Complete Program See Joint Sessions.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Sessions with Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Obstetrics and Gynecology and Pathology.

For Complete Program See Joint Sessions.

## SECTION ON PATHOLOGY

J. J. Moore ..... Chairman
E. F. Hirsch ..... Secretary

**TUESDAY AFTERNOON, MAY 16, 1944**
**PRIVATE DINING ROOM 5**

2:00- 5:00 p.m.

"Clinical Evaluation of Serological Tests for Syphilis in 8000 Cases"
J. M. Lubitz, Passed Assistant Surgeon, U. S. Public Health Service, Marine Hospital, Chicago.

"The Pathology Department in the Tumor Clinic of the Veterans' Administration"
W. L. McNamara, Lieutenant Colonel, M.C. AUS, Hines Hospital, Hines.

"Some Pathological Specimens from a Group of Supposedly Robust Men"
J. J. Kearns, Commander, M.C. USNR, Great Lakes.

"Laboratory Investigations in Relation to Penicillin Therapy"
Louis A. Schneider, Captain, M.C., USA, Gardiner Hopsital, Chicago.

"Clinical Observations in the Use of Penicillin"
Earl R. Denn, Lieutenant Colonel, M.C., USA, Gardiner Hospital, Chicago.

"Studies of N. Gonorrhea and N. Intracellularis in Relation to Control and Treatment"
I. Pilot, Major, M.C. USA, Fort Sheridan, Illinois.

"A New Method of Preventing Blood Coagulation"
Captain A. Sternberg, Sanitary Corps, USA, Fort Sheridan, Illinois.

**WEDNESDAY MORNING, MAY 17, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics and Obstetrics and Gynecology.

For Complete Program See Joint Sessions.

**WEDNESDAY AFTERNOON, MAY 17, 1944**
**GRAND BALLROOM**

1:30- 2:30
Clinico-Pathological Conference
Samuel Levinson, Chicago.

**THURSDAY MORNING, MAY 18, 1944**
**GRAND BALLROOM**

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics and Obstetrics and Gynecology.

For Complete Program See Joint Sessions.

# *Meetings of Special Groups*

## SECRETARIES' CONFERENCE

P. J. McDermott, Chairman .... Kankakee
E. F. Moore, Vice-Chairman .... Collinsville
George A. Barnett, Secretary .... Riverside

**TUESDAY EVENING, MAY 16, 1944**
**PRIVATE DINING ROOM 14**

The annual Secretaries' Conference dinner and meeting will be held Tuesday evening, May 16, 1944 at 6:00 o'clock in Private Dining Room 14.

The secretary, George A. Barnett, has announced the following program:

"Medical Plans of the Governor's Committee on Veterans' Rehabilitation"
Hermon H. Cole, Springfield.
"Medical Legislation"
Mr. John W. Neal, Chicago.

## VETERANS' SERVICE DINNER CONFERENCE

**TUESDAY EVENING, MAY 16, 1944**
**PRIVATE DINING ROOM 17**

Pliny R. Blodgett, Chicago Heights, Presiding.

"The Organization for the Medical Care of Veterans."
Lt. Col. Harold C. Lueth, Liaison Officer assigned to headquarters, A.M.A.

"Naval Medical Service in the South Pacific." (Personal Experiences.)
Lt. John H. Peterson, MC-V (s), USNR

Discussants:
Capt. C. B. Camerer, MC, USN, 9th Naval District, Great Lakes, Ill.
Col. John R. Hall, MC, Supt. and Administrative Head, Gardiner General Hospital, Chicago, Ill.
Mr. Charles G. Beck, Veterans' Administrative Facilities, Hines, Ill.
Col. Don G. Hilldrop, M.C., Chief Medical Branch Headquarters, 6th Corps Area, Chicago.
Capt. Alfred J. Toulon, MC, USN, Medical Officer in Command, U. S. Naval Hospital, Great Lakes, Ill.

## ILLINOIS CHAPTER AMERICAN COLLEGE OF CHEST PHYSICIANS

**TUESDAY NOON, MAY 16, 1944**
**PRIVATE DINING ROOM NO. 7**

Minas Joannides, President ..... Chicago
Fred M. F. Meixner, Vice-President ..... Peoria
Julius B. Novak, Secretary-Treasurer ..... Chicago
E. R. Levine, Chairman, Program Committee ..... Chicago
Willard Van Hazel, Chairman, Public Relations Committee ..... Chicago
O. C. Schlack, Chairman, Nominating Committee ..... Oak Forest

The annual meeting of the Illinois Chapter, American College of Chest Physicians, will be held at the Palmer House Chicago, May 16, 1944, in con-

nection with the annual meeting of the Illinois State Medical Society.

Colonel Arnold Dwight Tuttle, Medical Director, United Airlines, will be the guest speaker. He will present a paper, "The Effect of Air Travel on Cardio-respiratory Diseases," at the luncheon meeting.

A business meeting with reports of committees and election of officers will follow the luncheon.

## CENTRAL STATE SOCIETY OF INDUSTRIAL MEDICINE & SURGERY

### TUESDAY MORNING, MAY 16, 1944
### RED LACQUER ROOM

J. Daniel Williems, Program Chairman
W. M. Hartman, President ..... Macomb
F. M. Miller, President-Elect ..... Chicago
H. W. Wellmerling, Vice-President .... Bloomington
F. P. Hammond, Secretary-Treasurer ..... Chicago

A.M.

9:00 "The Relation of Malignancy to Trauma"
Harry E. Mock, Associate Professor of Surgery, Northwestern University, Senior Surgeon, St. Luke's Hospital, Chicago.

9:40 Discussion.

9:55 "The Back as an Industrial Problem"
Lewis M. Overton, Des Moines, Iowa. Member Board of Governors, Central States Society of Industrial Medicine and Surgery.

10:20 Discussion.

10:30 "The Changing Panorama of Industrial Medical Requirements"
Carl M. Peterson, Secretary, Council on Industrial Health, American Medical Association, Chicago.

11:00 Discussion.

11:15 "The Relation of Mouth Infection to Industrial Health; A Mouth Health Program for Industry"
Earle H. Thomas, M.D., D.D.S., LL.B., Past President, American and Chicago Societies of Oral Surgeons; Former Assistant Professor of Oral Surgery, Chicago College of Dental Surgery, Chicago.

11:45 Discussion.

### TUESDAY AFTERNOON, MAY 16, 1944
### RED LACQUER ROOM

### JOINT SESSION WITH SECTION ON SURGERY

## PHYSICIAN'S ASSOCIATION

### DEPARTMENT OF PUBLIC WELFARE
### STATE OF ILLINOIS

M. Goldberg ..... President
M. Lorber ..... Vice-President
J. Klapman ..... Secretary-Treasurer
E. Liebert ..... Chairman Program Committee

### TUESDAY MORNING, MAY 16, 1944
### PRIVATE DINING ROOM 14

9:00-12:00 a.m.

"The Rorschach Test in Post Encephalitis"
J. L. Endacott, Manteno.

This Rorschach study of a group of post encephalitis cases aims first of all to determine if a Rorschach pattern is present for the group as a whole. These findings are related and compared with earlier studies. Special consideration and emphasis is given to the factors of aggression and movement as they present themselves in Rorschach responses.

Discussion opened by I. Sherman, and M. Goldberg, Chicago.

"Buerger's Disease of the Brain and Hypertensive Encephalopathy"
N. Beim, Elgin.

The literature on central nervous system Buerger's Disease is reviewed and a differential diagnosis of Buerger's Disease briefly discussed.

Report is given of a case diagnosed as Buerger's Disease by several examiners. Several sympathectomies were performed. Material is being presented which does not confirm these findings. The questions of justifiable existence of central nervous system Buerger's Disease is discussed.

Discussion opened by B. Lichtenstein, Chicago.

"Hemorrhagic Encephalopathy Following Five Day Treatment of Early Syphilis with Massive Doses of Mapharsen: (Report of a Case with Recovery)."
G. Heilbrunn and N. Hoffenberg, Chicago.

The relative benignance of hemorrhagic encephalopathy following five day treatment with mapharsen as disclosed from the literature is confirmed by the present case. The role of the therapeutic agents employed is discussed and the use of high doses of ascorbic acid recommended. A conjectural explanation for the affective selection of this complication is offered.

Discussion opened by C. J. Farmer, Chicago.

"Organic Brain Disease with Ganser-like Syndrome"
A. Lieberman, Elgin.

A case report of a patient with Ganser Syndrome is being discussed. Differential diagnosis between the true Ganser Syndrome and all pseudo-Ganser-like states is offered.

Discussion opened by D. B. Rotman, Chicago.

"Therapeutic Techniques Used with A Special Group of Disturbed Children"
E. Angres, Chicago.

The paper deals with the psychiatric approach used with proper children in a controlled environment. Special emphasis is placed upon the creation and maintenance of a "therapeutic atmosphere." In order to maintain this type of atmosphere, not only close collaboration of all adults in charge of the children is necessary, but also discussion and ventilation of their own feelings and attitudes toward the various problems.

Discussion opened by M. Gittelson, Chicago.

"The Action of Shock Therapy in the Light of Clinical Observation"
B. Kovitz, Jacksonville.

Observations during convulsive therapy suggests the hypothesis (1) that the outcome in any case is simply a resultant of all the interpersonal factors concerned; (2) that the treatment acts on the neural mechanism which selectively mediates conscious expression of interpersonal attitudes, not on those attitudes themselves.

Discussion opened by C. F. Read, Elgin.

"Electric Shock Treatment for the Institutionalized Psychoneurotic" (A clinical review).
R. Gronner, Elgin.

A certain number of psychoneurotics eventually become institutionalized because of their failure to adjust to the reality of their environment, due to overwhelming anxiety or various other neurotic manifestations. A great number of them remain refractory to anything the hospital can offer in the line of conservative treatment. Theoretically, they are non-psychotic, but since their illness interferes so much with their adjustment, they are sometimes worse off than psychotic patients. Some of them are "border line" cases. It appeared practical to make available the benefit of electric shock treatment to patients of this kind, this point of view being based upon the hypothesis that many mechanisms are similar if not identical to those prevalent in psychosis. Particularly, the presence of elements of guilt, anxiety and depression seem to be indicative of success. The literature is quite divided in opinion. Our own study in a comparatively small group treated with electric shock, show good overall results with reference to socical recover, no total recoveries and usually enough improvement to make the patients accessible to other measures, particularly psychotherapy.

"Intramural Group Psychotherapy"
J. Klapman, Chicago.

Leadership principle as portrayed by Freud in "Mass Psychology and the Analysis of the Ego" not the only basis for Group Emotion and formation. Three of Redl's types of Group formations as they occur in usual group therapy sessions. Other psychodynamics. The didactic approach to group psychotherapy.

## FIFTY YEAR CLUB LUNCHEON

**WEDNESDAY NOON, MAY 17, 1944**
**PRIVATE DINING ROOM 9**

The annual luncheon of the Fifty Year Club will be held Wednesday noon, May 17, 1944, in private dining room 9.

Doctor Andy Hall, Chairman of the Fifty Year Club Committee since its organization, has sent out personal invitations to all members inviting them to be present.

The following speakers have been secured:

H. Rude, Chicago
Edward Ochsner, Chicago
Frederick Tice, Oak Park
Rudolph Homes, Charlottesville, Virginia
Arthur Lyles, Virginia
Benjamin Twitchell, Belleville

In addition to the above talks, others present will be given an opportunity to reminisce.

Of course, Carl Black of Jacksonville will have on display his interesting collection of photographs of about three hundred fifty year club physicians.

## MATERNAL WELFARE LUNCHEON

**WEDNESDAY NOON, MAY 17, 1944**
**CLUB ROOM 15-16**

The annual luncheon meeting of the Maternal Welfare Committee will be held at 12:00 o'clock on Wednesday, May 17, 1944.

The program will be a round table discussion on the Federal Plan for the Obstetrical Care of Service Men's Wives.

Discussion will be opened by:

John F. Carey, Joliet
Frederick H. Falls, Chicago
Hugo V. Hulerman, Springfield

Doctor Hullerman has been in charge of this program since it was put into operation in Illinois.

## ALUMNI LUNCHEONS

**University of Illinois — Palmer House, Private Dining Room 17**

The annual luncheon and election of officers of the Medical Alumni Association of the University of Illinois will be held at the Palmer House on May 17th at 12:00 o'clock noon. Reservations must be made before May 15th ($2.50 per plate) with Doctor M. H. Streicher, Secretary-Treasurer, 1853 West Polk Street, Chicago.

**Loyola University — Palmer House, Private Dining Room 18**

On Wednesday, May 17th, at 12:00 noon, the alumni of the Loyola University School of Medicine will have their annual luncheon meeting. Reservations and information may be secured from G. G. Grant, S.J., Faculty Secretary of the Alumni Association, 5625 Sheridan Road, Chicago 26. Plans have been made for Loyola alumni to contact one another at a desk to be placed near the Registration Desk at the meeting this year.

**Rush Medical College — Palmer House, Private Dining Room 8.**

On Wednesday, May 17, at 12:00 noon, the alumni of Rush Medical College will have their annual luncheon meeting. Plans are being made to accommodate some seventy-five physicians, and information relative to this luncheon can be secured at the registration desk.

**University of Chicago — Palmer House, Private Dining Room 7.**

Also on Wednesday noon, May 17th, the alumni of the University of Chicago will have their annual luncheon meeting. Tickets for this affair may be secured at the registration desk.

**Northwestern University Medical Alumni — Palmer House, Illinois Room.**

There will be a luncheon of Northwestern University Medical Alumni in connection with the annual meeting of the Illinois State Medical Society on Wednesday noon, May 17th, and tickets for this affair may be obtained at the Registration Desk.

**Medical Schools outside of Chicago — University Club.**

On Wednesday, May 17th, in association with the meeting of the Illinois State Medical Society, there will be a luncheon for the graduates of medical schools outside of Chicago.

This luncheon will be held at 12:30 p.m. at the University Club. Reservations may be made with Willard O. Thompson, 700 North Michigan Avenue, Chicago 11.

## MEDICAL WOMEN'S ASSOCIATIONS

**WEDNESDAY MORNING, MAY 17, 1944**
**PRIVATE DINING ROOM NO. 18**

8:00 a.m.

A complimentary breakfast for the women members of the Illinois State Medical Society will be served in Private Dining Room No. 18, on the club floor of the Palmer House at eight o'clock Wednesday morning, May 17, 1944.

Tickets may be obtained at the booth adjoining the registration desk.

## GOLF TOURNAMENT

Eighteen holes of golf on one of the finest courses in the Chicago district is just what your Golf Committee is offering every M.D. who attends the meeting of the Illinois State Medical Society this year.

You will remember the Golf Tournament was called off last year because of rain, but the large selection of prizes were carefully stored so this year we have prizes that would be impossible to secure at this time.

Location — Edgewater Country Club.

Time — Tuesday Morning, May 16th at 8:30 a.m.

Robert E. Cummings, Chairman
G. E. Johnson
Robert Hawkins
Herbert Schmitz
Eugene McEnery

## THE ANNUAL DINNER

**Wednesday Evening, May 17, 1944**

**Grand Ball Room, Palmer House**

**7:00 P. M.**

Invocation — Dr. Duncan H. Browne, St. James Episcopal Church, Chicago

Introduction — Past Presidents of the Illinois State Medical Society

Presentation of Trophies — Robert E. Cummings, M. D.

Presentation of Awards for Scientific Exhibits — Frank J. Jirka, M. D.



EDGAR ANSEL MOWRER

Address — Edgar Ansel Mowrer, famous war correspondent, noted columnist and an outstanding speaker. Mr. Mowrer who is author of the Pulitzer Prize Book, "Germany Puts the Clock Back" has just returned from England and North Africa. He will bring latest observations of European battle fronts. Mr. Mowrer is a native of Illinois having been born in Bloomington.

Dinner Music — Mr. Leo Terry

Tickets will be on sale at the Registration Desk beginning Monday afternoon, May 15.

WALTER H. THEOBALD, Chairman
The Annual Dinner Committee

## SCIENTIFIC EXHIBITS

Frank J. Jirka, Chairman ..... Chicago
H. Close Hesseltine, Director of Exhibits .. Chicago

**Booth 1—"Cardiovascular-Renal Diseases"**
Exhibit consists of three framed panels painted in attractive colors, each measuring 30 x 45 inches. The exhibit features the extent of mortality from cardiovascular-renal diseases; the influence of certain factors on the mortality; and the past and probable future mortality from these conditions.
Metropolitan Life Insurance Company.

**Booth 2—"Botulism"**
Exhibit of posters, charts and transparencies showing the cause, epidemiology, symptoms and prevention of botulism. This disease is a war time hazard due to home canned produce.
American Medical Association — Thomas G. Hull, Director, Scientific Exhibits.

**Booth 3—"Plasma Substitutes in the Treatment of Shock"**
The use and effectiveness of various plasma substitutes (pectin, gelatin and amino acids) are shown by means of charts and tables. Their indications and contraindications are presented. The sources and methods of administration of these plasma substitutes are shown.
Karl A. Meyer, Donald D. Kozoll, Bruno W. Volk, Frederick, Steigmann and Hans Popper. Hoktoen Institute for Medical Research of the Cook County Hospital.

**Booth 4—"Epidemic Ringworm of the Scalp" Chicago Area. Wood Light Demonstration**
This exhibit will consist of: (a) two descriptive charts, (b) photographs in black and white, (c) cultures, (d) microscopic slides under the microscopes, (e) Wood light demonstration on live subjects, two or three chairs for patients on whom the fluorescence of the wood light will be demonstrated.
Northwestern University Medical School, Department of Dermatology, E. A. Oliver, Chairman.
E. A. Oliver and I. M. Felsher and Miss Angelakos, Chicago.

**Booth 5—"Meniere's Syndrome"**
A series of several charts.
G. Henry Mundt, Chicago.

**Booth 6—"The Peoria Plan for Human Rehabilitation"**
Harold A. Vonachen, Caterpillar Tractor Company, Peoria.

**Booth 7—"Endocrine Regulation of Growth"**
The role of glands of internal secretion in the regulation of growth. Illustrated by a series of greatly enlarged photographs and also by a series of lantern slides which move continuously in a balopticon machine. Particular attention is paid to the role of chorionic gonadotropin and the sex hormone in the regulation of growth.
W. O. Thompson, N. J. Heckel, Richard Morris, University of Illinois College of Medicine, Chicago.

**Booth 8—"Illinois Public Aid Commission, Medical Care in the Social Security and General Relief Programs"**
The exhibit will include charts, maps, tables and illustrations which will explain the provisions and extent of the medical care programs for

recipients of OAP, ADC, BA, and general relief.
Raymond M. Hilliard, Public Aid Director, Illinois Public Aid Commission.

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**Booth 9—"Toxemia of Pregnancy"**

Drawings, gross and microscopic, models, graphs, and statistical charts showing the etiology, pathology, symptoms, diagnosis and treatment of eclamptogenic, nephritis toxemia, and hyperemesis gravidarum and acute yellow atrophy. Emphasis is placed on the pathology and treatment of these conditions.

F. H. Falls, Department of Obstetrics and Gynecology, College of Medicine, University of Illinois and
Charlotte S. Holt, Division of Public Health Instruction, State Department of Public Health, Chicago.

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**Booth 10—"Prosthetic Correction of Inoperable deformities"**

Exhibit consists of a colored motion picture showing how prostheses are made. It is of special interest in war time, since it deals with mutilations considered beyond surgical help. It also shows the place of prostheses as interim treatment to be worn while plastic surgery is being planned and even as plastic surgical corrections are in progress. The exhibit further displays photographic illustrations of patients with inoperable deformities and their cosmetic improvement while wearing the prostheses. Models will be shown and reprints of scientific articles on the subject will be available.

Adolph M. Brown, The Eye and Ear Infirmary, University of Illinois, Chicago.

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**Booth 11—"American College of Surgeons"**

Exhibit consists of posters on: Medical Service in Industry, showing by means of graphs, the development of recent trends compared with the previous decade: 2, Cancer clinics, their organization and steady growth: 3, Graduate training in surgery and surgical specialties with emphasis on post war increase of training plans: 4, Library and literary research, showing the activity of the library service during war time.

American College of Surgeons — Bowman C. Crowell, Associate Director.

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**Booth 12—"Induced Typhoid Fever Therapy in Asymptomatic Neurosyphilis"**

Five charts showing fever therapy, induced by typhoid fever vaccine, in treatment of asymptomatic neurosyphilis.

Alfred Paul Bay and Bernard Strassman, Alton State Hospital.

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**Booth 13—"The New 'Illinois Mental Health Act'"**

Graphic presentation of the types of admissions under the new Illinois Mental Health Act, and showing how various objectives were achieved by the passage of this Act. Instructions to physicians in admission procedures of patients to mental hospitals.

Illinois Department of Public Welfare, Mr. Rodney H. Brandon, Director, Springfield, H. H. Nierenberg, Chicago.

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**Booth 14—"Pathology of the Nasopharynx"**

Anatomy and pathology of the pharyngeal structures with special emphasis on the nasopharynx. This study is based on 130 autopsy specimens. Exhibit will consist of photographs illustrating technique of removing pharyngeal structures at autopsy; anatomical drawings and mounted specimens showing pathologic processes in nasopharynx.

Paul B. Szanto, Chicago and Kankakee State Hospitals, Hans Brunner and A. R. Hollender, Department of Otolaryngology, University of Illinois College of Medicine, Chicago.

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**Booth 15—"Amoebiasis"**

The various methods for the laboratory diagnosis of amoebiasis will be enumerated and discussed. Microscopic preparations and drawings of the Ethistolytica and other amoebae will be exhibited.

J. M. Lubitz, P. A. Surgeon, United States Public Health Service, U. S. Marine Hospital.

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**Booth 16—"Low Back Pain" — Rehabilitation of the Disabled Due to Low Back Pain**

Exhibit consists of posters describing and illustrating the symptom complex due to functional decompensation. (1) The Symptoms, (2) The Findings, and (3) the secondary symptoms and findings. Illustrations to show the mechanical development of the pathological changes. The technic for correction, the rationale of the method of treatment and an illustration of the technic by means of models. Description of apparatus to demonstrate the method of application of plaster of paris jacket. Posters to define the underlying principles of the method, illustrations to demonstrate the technique. Demonstration of rehabilitation of the patient by means of periodic rest and exercises, by means of figures and posters.

Emil D. W. Hauser, Assistant Professor of Bone and Joint Surgery, Northwestern University Medical School; Attending Orthopaedic Surgeon, Passavant Memorial Hospital, Chicago.

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**Booth 17—"Penicillin" — Manufacturing Phases**

Various steps in manufacturing of penicillin shown by means of built-in illuminated transparencies.

Abbott Laboratories, Phil. M. Wight, Secretary Exhibit Committee.

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**Booth 18—"Pulmonary Tuberculosis and Other Diseases of the Chest" — Differential Diagnosis and Treatment.**

Exhibit consist of three illuminated cabinets demonstrating by x-ray and pathologic specimens various conditions found in diseases of the chest. Each cabinet is six feet long and two feet wide. A moving picture will be shown in this booth.

Municipal Tuberculosis Sanitarium.

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**Booth 19—"Pioneers in the Study of Asthma"**

Exhibit consists of 54 mounted photographs of men who have done special work in this field.

Leon Unger and I. Isabel Brandt, Northwestern University Medical School, Chicago.

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**Booth 20—"Wartime Public Health Services of the Illinois Department of Public Health"**

A series of eight 32x48 inch chrome-framed panels (on supporting rods) dealing with activities contributing to the war effort such as the following: laboratory services offered to Illinois physicians, veneral disease treatment centers, sanitary engineering activities, control of tuberculosis in industry, industrial hygiene and communicable disease control.

Illinois Department of Public Health, Roland R. Cross, Director, Springfield.

**Booth 21—"Salmonellosis"**
A panel-type display with a 12 foot center section and two six foot wing sections dealing with Salmonellosis. The distribution of known cases, the modes of spread, the three main types of clinical manifestations, the laboratory diagnosis and the prevention of the disease are portrayed. The central panel has a cut-out portion showing a slide illuminated from the rear.
Illinois Department of Public Health, Roland R. Cross, Director, Springfield.

**Booth 22—"The County Health Department"**
Three-dimensional display depicting by means of cards flowing out from a cornucopia, the services offered by the medical health officer, the public health nurse and sanitary engineer, who are represented by cutout figures. This is accompanied by six posters, two on the rear wall and two on each side wall of the booth, describing the advantages and activities of a county health department.
Illinois Department of Public Health, Roland R. Cross, Director.

**Booth 23—"Survey of Opinion on Medical Care"**
A graphic presentation of the public's viewpoint on medical care and prepayment plans, on the program of the National Physicians Committee to develop public acceptance of voluntary prepayment plans as a method superior to federal government compulsory plans.
National Physicians Committee for the Extension of Medical Service.

**Booth 24—"Illinois Occupational Therapy Association"**
Posters explain use of occupational therapy in Army, Navy and civilian hospitals. A map will indicate the location of the 22 schools of occupational therapy now in operation. Pamphlets will be distributed.
Illinois Occupational Therapy Association, Ella V. Fay, OTR, Director of Occupational Therapy, Cook County Hospital.

**Booth 25—"Know Your Foods"**
The nutritive value of twenty different foods is shown by bar graphs attached to cardboard food models. The models are displayed on a table which is covered with seven colored wedges of cardboard. These are selected from the seven groups of the "Basic 7" Government poster, which forms the background of the exhibit.
Chicago Nutrition Committee, Illinois State Nutrition Committee.

**Booth 26—"Illinois E. M. I. C. Program"**
Lettered charts outlining Illinois plan for emergency maternal and infant care.
Roland R. Cross, Director State Department of Public Health.
Frederick H. Falls, Chairman, Governor's Advisory Committee to Division of Maternal and Child Hygiene.

**Booth 27—"Carcinoma of the Colon"**
Posters contain reproductions of x-ray, colored drawings of representative lesions, gross description of tumor, microscopical description of tumor, case history etc. Attempt is made to present an example of various locations of tumors and principles in treatment.
Danely Slaughter, L. G. Rossiter, W. H. Cole, University of Illinois College of Medicine, Department of Surgery.

**Booth 28—"Educational Committee, Illinois State Medical Society"**
Poster exhibit showing services of the Educational Committee.
Jean McArthur, Secretary.

## SPECIAL EXHIBITS

**"North Africa and Sicily"**
Exhibit consists of a series of water colors done by Major Bosworth while on active service in North Africa and Sicily, depicting the scenery in which the medical personnel worked.
Major Boardman M. Bosworth, M. C., U.S.A.

**"The Chicago Heart Association, Inc."**
Posters describing material for free distribution. One large poster will include "Modern Concepts of Cardiovascular Disease," published monthly by the American Heart Association, as well as "The Examination of the Heart and the Standardization of Blood Pressure Reading," "The Bulletin" of the Chicago Heart Association, and "Classification of Patients with Diseases of the Heart," "Rheumatic Fever in Children," and the "Metropolitan Life Insurance Handbook."

**"Fight Cancer With Knowledge"**
Placards depicting the recognized methods of treatment of cancer, animal research in cancer control, and normal cell growth and cancer. Also posters explaining the work of the Woman's Field Army — the Cancer Prevention Clinic for Women and Surgical Dressing Units. All recent pamphlets issued by the American Society for the Control of Cancer will be available.
American Society for the Control of Cancer, Woman's Field Army, Illinois Division — Mrs. Arthur I. Edison, State Commander.

**"Hygeia, The Health Magazine"**
Exhibit showing health education through Hygeia, the Health Magazine, with sample copies for distribution.
Woman's Auxiliary, Illinois State Medical Society.

**"Benevolence Fund of the Illinois State Medical Society"**
Posters and Material explaining this Fund and its operation.
Woman's Auxiliary, Illinois State Medical Society.

# *Technical Exhibitors*

## 1944 ANNUAL MEETING

Abbott Laboratories, North Chicago, Illinois
A. S. Aloe Company, St. Louis, Missouri
American Hospital Supply Corporation, Chicago, Illinois
The Armour Laboratories, Chicago, Illinois
Ayerst, McKenna and Harrison, Ltd., New York, New York
Bilhuber-Knoll Corporation, Orange, New Jersey
Ernst Bischoff Company, Ivoryton, Connecticut
The Borden Company, New York, New York
The Burdick Corporation, Milton, Wisconsin
Burrough Wellcome & Company, New York, New York
Cambridge Instrument Company, Inc., New York, New York
Camel Cigarettes, New York, New York
Carnation Company, Oconomowoc, Wisconsin

Chicago Pharmacal Company, Chicago
Ciba Pharmaceutical Products, Inc., Summit, New Jersey
The Coca-Cola Company, Atlanta, Georgia
F. A. Davis Company, Philadelphia, Pennsylvania
Doak Company, Inc., Cleveland, Ohio
The Doho Chemical Corporation, New York, New York
Eli Lilly and Company, Indianapolis, Indiana
C. B. Fleet Co., Inc., Lynchburg, Virginia
Flint, Eaton and Company, Decatur, Illinois
Gerber Products Company, Fremont, Michigan
General Electric X-Ray Corporation, Chicago, Illinois
Otis E. Glidden and Company, Evanston, Illinois
The Harrower Laboratory, Inc., Glendale, California
H. J. Heinz Company, Pittsburgh, Pennsylvania
Horlick's Malted Milk Corporation, Racine, Wisconsin
Hynson, Westcott & Dunning, Inc., Baltimore, Maryland
The Kelley-Koett Mfg. Co., Inc., Covington, Kentucky
Kellogg Company, Battle Creek, Michigan
Lea & Febiger, Philadelphia, Pennsylvania
Lederle Laboratories, New York, New York
Libby, McNeill & Libby, Chicago, Illinois
J. B. Lippincott Company, Philadelphia, Pennsylvania
M & R Dietetic Laboratories, Inc., Columbus, Ohio
Mead Johnson & Company, Evansville, Indiana
Medical Arts Supply Company, Chicago, Illinois
Medical Film Guild, New York, New York
The Medical Protective Company, Fort Wayne, Indiana
The Mennen Company, Newark, New Jersey
Wm. S. Merrell Company, Cincinnati, Ohio
The C. V. Mosby Company, St. Louis, Missouri
V. Mueller & Company, Chicago, Illinois
Nutrition Research Laboratories, Chicago, Illinois
Oxygen Equipment & Service Company, Chicago, Illinois
Parke, Davis & Company, Detroit, Michigan
The E. L. Patch Company, Boston, Massachusetts
Pet Milk Sales Corporation, St. Louis, Missouri
Philip Morris & Company, Ltd., Inc., New York, New York
Poloris Company, Inc., Jersey City, New Jersey
The Proctor & Gamble Company, Cincinnati, Ohio
W. B. Saunders Company, Philadelphia, Pennsylvania
Schering Corporation, Bloomfield, New Jersey
G. D. Searle & Co., Chicago, Illinois
Sharp & Dohme, Inc., Philadelphia, Pennsylvania
Singer Sewing Machine Company, New York, New York
Smith, Kline & French Laboratories, Philadelphia, Pennsylvania
Spencer, Incorporated, New Haven, Connecticut
E. R. Squibb & Sons, New York, New York
Sutliff & Case Company, Inc., Peoria, Illinois
Westwood Pharmacal Corporation, Buffalo, New York
White Laboratories, Inc., Newark, New Jersey
Winthrop Chemical Company, Inc., New York, New York
Wyeth Incorporated, Philadelphia, Pennsylvania
Zimmer Manufacturing Company, Warsaw, Indiana

# NOTES ON TECHNICAL EXHIBITS

### ABBOTT LABORATORIES, Booth No. 63

A hearty welcome awaits you here
Sol In this booth be stepping
To chat with Abbott men sincere
Your knowledge to be pepping
On Pentothal and Sulfa Drugs
On Vitamins and Pollens
On Metaphen for killing bugs
In Ampoules and in Gallons.
Moral: Be sure to stop at 63
Our line of Abbott drugs to see.

### A. S. ALOE, Booth No. 109

A. S. Aloe Company will exhibit a cross section of their complete line of instruments, equipment and supplies. Included will be Stainless Steel surgical instruments available for delivery, the Aloe Magnalite which provides a combination of a fully adjustable office light with high-powered magnification for splinter, foreign-body work, etc., the Goth Sulfonamide Testing Set, and other interesting new developments.

In charge of the Aloe display will be Mr. Lewis Frazin, Chicago manager.

### AMERICAN HOSPITAL SUPPLY CORPORATION, Booth No. 15

Baxter Intravenous Solutions and Blood, Plasma, and Serum Equipment will be a feature of the American Hospital Supply Corporation booth. Solutions in the famous Baxter Vacoliter will be displayed, along with such transfusion equipment as Transfuso-Vacs, Plasma-Vacs, and Centri-Vacs. Trained staff members will be in attendance to explain and answer questions on all phases of the Baxter intravenous techniques.

Also on display will be many specialty items of importance to better hospital routine and service.

### THE ARMOUR LABORATORIES, Booths 82 and 83

The Armour Laboratories extend a cordial invitation to the members of the Illinois State Medical Society to visit their exhibit in Booths 82 and 83.

If you have not already received a copy of the new Armour book on "The Thyroid Gland and Clinical Application of Medicinal Thyroid", you may secure one by inquiring at our display.

Representatives in attendance at the Armour exhibit will welcome your inquiries on the more recent developments in Endocrinology.

### AYERST, McKENNA & HARRISON, LIMITED, Booth No. 99

"Premarin", a highly potent, naturally-occurring complex of conjugated estrogens, will be featured.

"Premarin" constitutes a recent advancement in endocrine research resulting from the collaboration of Dr. J. B. Collip, Director of the Research Institute of Endocrinology, McGill University, with our Laboratories.

### BILHUBER-KNOLL CORPORATION, Booth 79

A complete line of our fine medicinal chemicals is on display for your inspection. Among these useful products are: Bromural — a sedative and mild hypnotic; Dilaudid — analgesic and cough sedative; Metrazol — stimulant and restorative; Octin — antispasmodic in ureteral and like spasms; Theocalcin and Phyllicin — diuretic and myocardial stimulants.

These and our other products may be prescribed alone or in combination with other drugs. Thus you can individualize your prescriptions for them to the needs of each patient.

At our booth Messrs. Art Murbach and Basil Kidwell will welcome your visits. They invite your discussions on the practical and scientific use of our every-day prescription chemicals.

### ERNST BISCHOFF COMPANY, Booth No. 75

In our exhibit we shall feature Lobelin Bischoff, respiratory stimulant and resuscitant in asphyxia neonatorum; Anayodin, an effective nontoxic amebacide; Diatussin and Diatussin Syrup, antispasmodic; Activin, a foreign protein for non-specific therapy; Viscysate, for the symptomatic relief of hypertension; Sas-Par, antipruritic, oral treatment for Psoriasis.

### THE BORDEN COMPANY, Booth No. 80

A cordial welcome awaits you at the Borden Booth. There on display is a line of scientific infant formula foods which our representative will be pleased to discuss with you. BIOLAC, NEW IMPROVED DRYCO, MULL-SOY, KLIM, BETA LACTOSE, and MERRELL-SOULE POWDERED MILKS.

### THE BURDICK CORPORATION, Booth No. 100

The Burdick Corporation will exhibit selected items from their line of Physical Therapy Equipment. Infra-red and Ultraviolet Lamps will be featured, as well as the Rhythmic Constrictor for the treatment of peripheral vascular disease. Doctors are invited to register for the Burdick Syllabus, a periodical of clinical material on the use of Physical Therapy.

### BURROUGHS WELLCOME & COMPANY, Booth No. 98

Burroughs Wellcome & Co., New York, presents a representative group of fine chemicals and pharmaceutical

preparations, together with new and important therapeutic agents of special interest to the medical profession.

### CAMBRIDGE INSTRUMENT COMPANY, INC., Booth No. 8

### CAMEL CIGARETTES, Booths 103 & 104

CAMEL Cigarettes will exhibit large detailed photographs of equipment used in comparative tests of the five largest-selling brands of cigarettes. Dramatic visualization of nicotine absorption in the human respiratory tract from cigarette smoke will be demonstrated.

International news with the CAMEL Cigarette Trans-Lux "Flash Bulletins", may be seen while enjoying a supply of slow-burning CAMEL Cigarettes.

### CARNATION COMPANY, Booth No. 101

You are invited to visit the Carnation Company booth where you will see an unusual reproduction of the Carnation Milk Farm and find presented some interesting information on the various uses of Irradiated Carnation Milk for infant feeding, child feeding, and general diet purposes.

Valuable literature will also be available for distribution.

### CHICAGO PHARMACAL COMPANY Booth No. 64

### CIBA PHARMACEUTICAL PRODUCTS, INC., Booth No. 71

Physicians are cordially invited to visit our booth where a CIBA representative will answer questions regarding CIBA specialties, and discuss in detail our newest preparations: Privine Hydrochloride, a powerful nasal vasoconstrictor with a prolonged action, a product which has already gained considerable recognition in its field; and Metandren Linguets, newest form of Metandren, most potent androgen available for oral use. Clinical investigation indicates that this method of sublingual administration results in greater potency.

### THE COCA-COLA COMPANY, Booth No. 5

Coca-Cola will be served to the delegates with the compliments of The Coca-Cola Company.

### F. A. DAVIS COMPANY, Booth No. 65

The F. A. Davis Company is here offering a complete line of medical books of timely interest for examination by convention visitors.

Among the many newer books are "The Romance of Medicine" by Dr. B. L. Gordon; "Sulfonamide Therapy in Medical Practice" by Dr. F. C. Smith; "Segmental Neuralgia in Painful Syndromes" by Drs. B. D. Judovich and W. Bates; "The Diagnosis and Treatment of Acute Medical Disorders" by Dr. F. D. Murphy; "The Adrenal Glands in Health and Disease" by Dr. M. A. Goldzieher, and others which will be ready soon.

### DOAK COMPANY, Booth No. 84

If you are interested in dermatological problems, visit our booth. Perhaps we can help you with our suggestions and remedies.

### DOHO CHEMICAL CORPORATION, Booth No. 72

The Auralgan Exhibit consists of a model of the human auricle four feet high together with a series of twenty-four three dimensional ear drums, modelled under the supervision of outstanding otologists. Each of these drums depicts a different pathologic condition based upon actual case observation and prepared, in so far as possible, with strict scientific accuracy so as to be highly instructive and interesting to all physicians.

### ELI LILLY AND COMPANY, Booth No. 58

The Lilly exhibit will feature an anatomical model illustrating the technics of caudal and spinal anesthesia. Lilly products will be on display, and medical service representatives will be present to assist visiting physicians in every possible way.

### C. B. FLEET CO., INC., Booth No. 106

An ethical product for over half a century — a saline eliminant.

What may you, as a physician, expect from this stable, non-toxic concentrate of the two U.S.P. sodium phosphates?

1. Accurate dosage, regulated to the patient and to his condition.
2. The maximum therapeutic effectiveness of sodium phosphate.
3. Quick, gripeless evacuation, for emergencies.
4. Mild, controllable elimination, for chronic bilary disturbance or constipation.
5. Unusual freedom from after-irritation, with normalizing buffer action.
6. Safe action with administration of the sulfonamides.

Are you getting the full value of medication in your daily problems of elimination?

### FLINT, EATON AND COMPANY, Booth 92

A new method for tropical application of the Sulfonamides will be the major product exhibited at the Flint, Eaton and Company booth. Trained men will be on hand to answer your questions regarding the use of this product as well as other important Flint, Eaton and Company specialties.

### GERBER PRODUCTS COMPANY, Booth No. 70

Gerber's CEREAL FOOD and STRAINED OATMEAL are enriched with vitamins of the B-complex and with iron. They are ready to serve upon addition of milk or formula. These and other Gerber Foods are on display.

We invite your inspection of the Gerber literature.

### GENERAL ELECTRIC X-RAY CORPORATION, Booth No. 4

Although working around the clock to meet production schedules essential to the war effort, the General Electric X-Ray Corporation is not unmindful of the need for expert maintenance service by owners of x-ray and other electro-medical equipment. **G. E.'s Periodical Inspection and Adjustment Service** continues to function, now as in the pre-war years, through branch offices and regional service depots throughout the country. Stop in at the G. E. exhibit space for further information on "P.I. and A." Service. At the same time you can obtain interesting facts about the use of photo-roentgenography in mass x-ray chest surveys, and see a demonstration of the G-E Orthostereoscope, for viewing stereoscopic 4 x 5 inch chest photo-roentgenograms.

### OTIS E. GLIDDEN AND COMPANY, Booth No. 67

Physicians may obtain latest information on Zymenol, a natural therapy for Gastro-Intestinal Dysfunction — effective without catharsis, artificial bulkage or large doses of mineral oil — cannot affect vitamin absorption — at the Otis E. Glidden and Company booth.

### THE HARROWER LABORATORY, INC., Booth No. 73

This display will consist of literature and samples of standardized endocrine products for both oral and parenteral administration. Products derived from the Adrenal Cortex, Pituitary and Thyroid glands will predominate. Harrower products also include digestive enzyme preparations and these will be on exhibition. The Harrower display will be in charge of competent representatives during the meeting.

### H. J. HEINZ COMPANY, Booth No. 74

H. J. Heinz Company offers you: 11th edition of the NUTRITIONAL CHART and its supplement, the NUTRITIONAL OBSERVATORY. A special feature is YOUR BABY'S DIARY AND CALENDAR. Physicians prescribing soft, bland and low residue diets will be interested in the SPECIAL DIETARY FOODS BOOK.

Physicians practicing pediatrics realize the importance of Heinz Strained Junior Foods and Pre-Cooked Cereal Food and especially today recommend their use to mothers engaged in wartime industries for their young children.

### HORLICK'S MALTED MILK CORPORATION, Booth No. 12

The Horlick's Malted Milk Corporation, Racine, Wisconsin, is exhibiting Horlick's Malted Milk, in both natural and chocolate flavors, powder and tablets. Members of the profession are especially invited to enjoy a delicious drink of Horlick's. Malted Milk Fortified with vitamins A, $B_1$, D and G. Our representatives in attendance will be only too glad to answer any inquiries and explain the qualities of our products.

### HYNSON, WESTCOTT & DUNNING, INC. Booths No. 13 and 14

Prominent among the products exhibited will be Mercurochrome, now in the 23rd year of acceptance by the Council on Pharmacy and Chemistry of the American Medical Association. Sterile Shaker Packages of Crystalline Sulfanilamide, developed in the H. W. & D. laboratories in cooperation with military authorities for use in the treatment of wounds, will also be displayed.

Thantis Lozenges and Lutein Extract Ampules, in addition to the diagnostic solutions and apparatus supplied by the manufacturers, will be featured. The clinical effectiveness of Lutein Extract, an aqueous extract of corpus luteum, in the treatment of obstetrical complications, especially threatened and habitual abortion, will be illustrated by especially prepared diagrams. Visiting delegates are invited.

### THE KELLEY-KOETT MFG. CO., INC., Booth No. 20

### KELLOGG COMPANY, Booth No. 60

All Kellogg's ready-to-eat cereals either are whole grain, natural, restored or fortified.

Kellogg's Pep Whole Wheat Flakes is fortified with additional vitamins $B_1$ and D. One serving (1 ounce) furnishes one-fourth the minimum daily requirement for adults for thiamin (vitamin $B_1$), and sufficient vitamin D to meet all daily requirements for that vitamin.

Corn Flakes and Rice Krispies, contributing whole grain values of thiamin (vitamin $B_1$), niacin, and iron, may be included freely in wheat-free and low residue diets.

Nutrition information and diet lists are available at the Kellogg booth.

### LEA & FEBIGER, Booth No. 91

Lea and Febiger will exhibit, among their new works, Lewin on "Backache and Sciatica," Lichtman on the "Gallbladder," Dyke and Davidoff's "Roentgen Treatment of Diseases of the Nervous System," Moon on "Shock," and Moritz on "Pathology of Trauma." New editions will be shown of Gray's "Anatomy," Levinson and MacFate's "Clinical Laboratory Diagnosis," Ormsby and Montgomery on "Diseases of the Skin," Ballenger on the "Ear, Nose and Throat," Boyd's, "Textbook of Pathology," Kraines' "Therapy of the Neuroses and Psychoses," Craig and Faust's, "Clinical Parasitology," Rhinehart's, "Roentgenographic Technique" and Bell's "Textbook of Pathology."

### LEDERLE LABORATORIES, INC., Booth No. 62

Lederle Laboratories, Inc., will show their complete line of biologicals and specialty pharmaceuticals and will have in attendance a number of local men who will be qualified to answer inquiries from visiting physicians.

All of the "Sulfa" drugs will be shown in their various forms. Also the newer advances in antitoxins, serums and antibacterial serum will be exhibited.

### LIBBY, McNEILL & LIBBY, Booth No. 102

Libby's strained and homogenized baby foods are featured at the Libby booth. Physicians are invited to stop and discuss new findings on the greater availability of iron and ease of digestion of Libby's Council Accepted foods for babies.

### J. B. LIPPINCOTT COMPANY, Booth No. 89

Lippincott's headliner is the new one-volume War Edition of Thorek's MODERN SURGICAL TECHNIC. Other significant and timely new Lippincott books are Bacon's ESSENTIALS OF PROCTOLOGY . . . Brown & McDowell's SKIN GRAFTING OF BURNS . . . Cope's COCOANUT GROVE BURNS, Management at the Massachusetts General Hospital 111 Ferguson's SURGERY OF THE AMBULATORY PATIENT . . . Kampmeier's ESSENTIALS OF SYPHILOLOGY . . . Sappington's ESSENTIALS OF INDUSTRIAL HEALTH . . . Strecker's FUNDAMENTALS OF PSYCHIATRY.

Be sure to see the brand new 4th edition of Dr. Thorek's SURGICAL ERRORS AND SAFEGUARDS!

### M & R DIETETIC LABORATORIES, INC., Booth No. 66

M & R Dietetic Laboratories, will display Similac, a food for infants deprived either partially or entirely of breast milk; also powdered SofKurd.

Mr. E. M. Stevens and Mr. A. E. Boodel will appreciate the opportunity to discuss the merit and suggested application of these products.

### MEAD JOHNSON & COMPANY, Booths No. 107 and 108

"Servamus Fidem" means We Are Keeping the Faith. Almost every physician thinks of Mead Johnson & Company as the maker of Dextri-Maltose, Pablum, Oleum Percomorphum and other infant diet materials — including the new precooked oatmeal cereal, Pabena. But not all physicians are aware of the many helpful services this progressive company offers physicians. A visit to our booths will be time well spent.

### MEDICAL ARTS SUPPLY COMPANY, Booth No. 17

Our exhibit will include a suite of Hamilton Furniture, the Supersight examining lamp which magnifies and illuminates at the same time, physician's scale, and miscellaneous surgical instruments and specialties.

### MEDICAL FILM GUILD, Booth No. 7

Medical Film Guild emphasizes its talking papers in this year's program of "MEDICAL FILMS THAT TEACH." Hospital and Medical Society program chairmen, now faced with depleted staffs because of the war emergency, who desire educational material for their meetings, find that Medical Film Guild's motion picture film textbooks answer that important problem. Through grants for post graduate instruction these films are available at no charge to any hospital or medical society meeting and to the medical services connected with the Armed Forces of the United States. Exhibition is also included at no charge under this plan.

Subjects available are: Inguinal Hernioplasty, Asphyxia Neonatorum, Non-operative Treatment of Paranasal Sinusitis, Otitis Media in Pediatrics, A Clinic on Acute Mastoiditis, Otoscopy in the Inflammations, A Clinic on Sigmoid Sinus Thrombosis, Pharmacology of Respiratory Stimulants, A Clinic on Chronic Otitic Purulencies, and Amebiasis and Its Treatment.

### THE MEDICAL PROTECTIVE COMPANY, Booth No. 18

The Medical Protective Company's representative, thoroughly trained in Professional Liability underwriting, invites you to visit our exhibit booth. He is entirely familiar with the principles of the reciprocal rights and duties of a doctor and patient and with the circumstances peculiar to that relationship.

He will be glad to explain how his Company meets the exacting requirements of adequate liability protection, which are peculiar to the Professional Liability field.

### THE MENNEN COMPANY, Booth No. 85

The Mennen Company will exhibit their two baby products — Mennen Antiseptic Baby Oil and Mennen Antiseptic Baby Powder, in addition to their fungicidal foot powder — Quinsana.

The Antiseptic Oil is now being used routinely by more than 90% of the hospitals that are important in maternity work.

Be sure to register at the Mennen exhibit for the Lucky Number Prize Drawing to be held on the last day of the convention.

The Mennen exhibit will be in charge of Mr. G. H. Lubin and Mr. R. E. Slentz.

### THE WM. S. MERRELL COMPANY, Booth No. 21

Particular attention is called to a new development of Merrell Research for local treatment of pyogenic infections — Sulfa-Ceepryn Cream, which employs the unique detergent-germicide, Ceepryn, to reinforce the balanced bacteriostatic action of sulfathiazole and sulfanilamide. Other Merrell prescription specialties of established usefulness in clinical medicine also will be displayed.

### THE C. V. MOSBY COMPANY, Booth No. 90

A cordial invitation is extended to visit The C. V. Mosby Company booth where he will display a complete line of medical publications.

Many recent releases of timely interest will be shown and our representative will be glad to serve you in any way possible.

### V. MUELLER & COMPANY, Booths No. 1 and 2

A representative selection of instruments and equipment for eye, ear, nose and throat, orthopedic, urological and general surgery, will be displayed in the Mueller Exhibit. The latest in modern medical furniture will also be shown.

### NUTRITION RESEARCH LABORATORIES, Booths No. 68 and 69

Nutritional Research Laboratories, Chicago, will again feature Ertron, used extensively by the medical profession in treating chronic arthritis. New clinical literature and information pertaining to the product will be available for members and guests of the Society.

Bezon, Whole Natural Vitamin B. Complex in tabule form, and companion products will also be on display.

Representatives of the company will be available at the booth at all times, and will welcome the opportunity of discussing our products with the physicians attending the meeting.

### OXYGEN EQUIPMENT & SERVICE COMPANY, Booth No. 57

Many new and interesting developments in inhalational therapy can be seen at the Oxygen booth. These will in-

clude the Dry Ice Oxygen Tent, the E & J Resuscitator, Aviation Type Face Masks, and the highly efficient S.O.S. Insufflation Unit.

Representatives who are specialists in the field of Oxygen Therapy will be glad to answer any questions on the new techniques and uses of oxygen and will demonstrate different types of equipment.

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### PARKE, DAVIS & COMPANY, Booth No. 3

At the Parke-Davis Exhibit which has been streamlined because of present war-time requirements, you will find many new and scientific Pharmaceutical and Biological Products. Included in this display are such outstanding preparations as Phemerol, a relatively non-toxic and non-irritating germicide and antiseptic; Vitamin Products; Sulfa Drugs; Despeciated Antitoxins, and numerous other outstanding products of timely interest.

Able and courteous members of the Parke, Davis & Company Staff are in daily attendance to serve you.

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### THE E. L. PATCH COMPANY, Booth No. 81

The Patch representatives will welcome your visit to their booth. We plan to feature Gadoment, America's original cod liver oil ointment; Kondremul, a gentle, pleasant-tasting Irish moss-mineral oil emulsion; Secremol, a pleasant-tasting ammonium chloride cough preparation which has the added feature of a wetting agent to increase its efficacy; Trimagnol, a new and different antacid tablet containing magnesium trisilicate and vitamin C; and Thiasulfamix, a cream containing sulfanilamide and sulfathiazole for use on wounds and skin lesions.

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### PET MILK SALES CORPORATION, Booths No. 93 and 94

A complete display of material illustrating the time-saving Pet Milk services available to physicians.

Specially trained representatives will be in attendance to give you information about the production of Pet Milk and its use for infant feeding. Miniature cans will be given to physicians visiting the exhibit.

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### PHILIP MORRIS & COMPANY, LTD., INC., Booth No. 78

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes.

Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

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### POLORIS COMPANY, INC., Booth No. 11

The Poloris Company's exhibit will feature an interesting display of the medicinal ingredients contained in Poloris Dental Poultice.

This display has been designed to acquaint the members of the medical profession with the purpose of Poloris Dental Poultice, namely, local medicinal counterirritation for the prompt emergency relief of irritation, inflammation or congestion of the teeth and gums. Members and their guests are cordially invited to visit the Poloris exhibit.

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### THE PROCTER & GAMBLE COMPANY, Booth No. 59

At the Procter & Gamble booth, visitors will be acquainted with the qualities of Ivory Soap which have resulted in Ivory's being recommended, "By more doctors than all other brands of soap together."

Copies of Ivory's popular booklet, "Bathing Your Baby the Right Way," prepared with the cooperation of a world-famous maternity center, will be available free of charge to visitors.

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### W. B. SAUNDERS COMPANY, Booth No. 110

This publishing house will exhibit their complete line of books. Included among the new books to be shown are. Bockus' 3-volume work on "Gastro-enterology," 5th edition of Christopher's "Minor Surgery," Erich & Austin's "Traumatic Injuries of Facial Bones," Hoffman's "Female Endocrinology," Moll's "Aesculapius in Latin America," Orr's 1-volume "Operative Surgery," McComb's "Internal Medicine in General Practice," Shaar & Kreuz "External Fixation of Fractures," Lundy's "Anesthesia," Warton's "Gynecology and Female Urology," the Military Medical and Surgical Manuals, Official U. S. Public Health Service Industrial Hygiene Manual, Stieglitz' "Geriatrics," Weiss & English's "Psychosomatic Medicine," and many others.

### SCHERING CORPORATION, Booth No. 77

Schering Corporation, in line with their policy of bringing out the latest in endocrine research, is featuring the new estrogenic product — ESTINYL Tablets.

ESTINYL, a derivative of the natural hormone alpha-estradiol, is most economical and is orally effective in dosage of .02 and .05 mg. It produces very little nausea and toxic side effects.

Other Schering preparations on display will be ORETON-F Pellets, ORETON, ORETON-M Tablets, PROGYNON-B, PRANONE, PROLUTION, and CORTATE, and the diagnostic products for X-Ray — NEO-IOPAX and PRIODAX.

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### G. D. SEARLE & CO., Booth No. 76

G. D. Searle & Company will show a number of new products of Searle Research which have contributed so much to the recent armamentarium of the physicians.

Products such as Searle Aminophyllin, Metamucil, Ketochol, Floraquin, Gonadophysin, Tetrathione, Pavatrine, are results of this research which has been greatly expanded in the new Searle Laboratories.

An illustration of the new Laboratories will be featured in the exhibit.

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### SHARP & DOHME, INC., Booth No. 87

Sharp & Dohme will have a display featuring their new sulfonamide, Sulfamerazine, and also 'Sulfasuxidine', 'Lyovac' Normal Human Plasma, Tyrothricin Concentrate (Human), 'Depropanex', 'Delvinal' Sodium, 'Propadrine' Hydrochloride products and 'lyovac' Tetanus Antitoxin, Bovine.

Capable, well-informed representatives will be on hand to welcome all visitors and furnish information on Sharp & Dohme products.

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### SINGER SEWING MACHINE COMPANY, Booths No. 9 and 10

Specially trained demonstrators will exhibit the Singer Surgical Stitching Instrument. This instrument, which was developed in close cooperatien with the surgical profession, has attracted much attention at medical conventions and clinical trials have definitely proved its success and practicability.

All doctors, nurses and hospital staff members are cordially invited to see this unique contribution to surgery. Motion pictures of operations showing the instrument in use will be shown, and free literature describing the instrument in detail will be available.

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### SMITH, KLINE & FRENCH LABORATORIES, Booth No. 86

Benzedrine Sulfate Tablets and 'Paredrine' — Sulfathiazole Suspension are featured at this exhibit.

The potent central nervous stimulation of Benzedrine Sulfate offers, throughout a wide range of application, "a therapeutic rationale which, in its very efficiency, cuts across the old categories."

Paredrine-Sulfathiazole Suspension is the only vasoconstrictor-Sulfonamide combination which combines **prolonged** bacteriostasis, **non-stimulating** vasoconstriction, and therapeutically **ideal** PH. Not a solution, but an aqueous suspension of 'microform' crystals of free sulfathiazole, it produces **no** irritation, no stinging and no hyperemia.

Our especially trained professional representatives will be glad to discuss with you the potentialities and possible indications of our products in your own practice.

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### SPENCER, INCORPORATED, Booth No. 88

An interesting exhibit featuring individually designed supports for abdomen, back and breasts. Spencer Supports are prescribed as an aid to treatment for the following: Hernia — Visceroptosis with symptoms — Postoperative — Back Conditions — Maternity and Postpartum — Obesity — Movable Kidney — Breast Conditions and certain forms of Heart Disease.

Samples are on display and trained representatives will be available to answer your questions.

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### E. R. SQUIBB & SONS, Booth No. 61

Physicians attending the Illinois State Medical Society meeting are cordially invited to visit the Squibb exhibit. Several new items will be shown. Among them is Intocostrin, the standardized Purified Curare Extract now widely used to soften convulsion in shock therapy; a new, highly useful therapeutic multi-vitamin preparation; a sulfathiazole-ephedrine-derivative combination for ophthalmic use.

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### SUTLIFF & CASE COMPANY, INC., Booth No. 105

Sutliff & Case Co., Inc., of Peoria, Illinois, will have on display a few of the outstanding Pharmaceuticals, and their representative who calls on you will be present to greet you. Be sure to see us and renew old acquaintances.

### WESTWOOD PHARMACAL CORPORATION, Booth No. 55

The Westwood Pharmacal Corporation will feature LOW-ILA CAKE, a lathering detergent in cake form; and WEST-HIAZOLE, solutions of Sulfathiazole.

### WHITE LABORATORIES, INC., Booth No. 19

At the White Laboratories booth you will find interesting copies of a series of publications under the general title "Diagnostic Aids to Vitamin Deficiency Conditions." Medical Service Representatives in attendance will be very glad to discuss these with you.

The latest clinical reports on results of the use of White's Vitamin A and D Ointment in the treatment of burns and various types of ulcers will also be available. This is a product which you will undoubtedly find of great interest.

### WINTHROP CHEMICAL COMPANY, INC., Booth No. 56

Winthrop Chemical Company, Inc. extends a cordial invitation to visit their booth where representatives will gladly discuss any of the numerous preparations, introduced by this firm, which are of special interest to you. Valuable booklets are available dealing with anesthetics, chemotherapeutic agents, hypnotics, sedatives, antisyphilitics, diagnostics, diuretics, vasodilators, vitamins and hormones.

### WYETH INCORPORATED, Booths No. 95, 96 and 97

Wyeth Incorporated invite you cordially to visit their booths which will feature the medical specialties of their nutritional, biological and pharmaceutical divisions.

### ZIMMER MANUFACTURING COMPANY, Booth No. 6

Zimmer Manufacturing Company, Warsaw, Indiana, will exhibit a complete line of splints and bone instruments. The Reduction-Retention Apparatus for external skeletal fixation will be featured, as well as the Stryker Screw Driver, which holds screws with complete rigidity.

# ILLINOIS STATE MEDICAL SOCIETY

## 104 Annual Meeting
## Chicago, Illinois
## May 16, 17, 18, 1944

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## *Chicago Medical Society*

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## Chicago, May 16, 17, 18, 1944

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# PROGRAM

**The Seventeenth Annual Convention of the Woman's Auxiliary to the Illinois State Medical Society**

**Chicago, Illinois**
**May 16, 17, 1944**

Mrs. Milton A. Nix, Presiding

**TUESDAY, MAY 16, 1944**
**PALMER HOUSE**
**CLUB SECTION — WABASH SIDE**

9:00 a.m. Registration — Lounge Floor — Club Section.

1:30 p.m. Opening Business Session.
Pledge to Flag.
Auxiliary Pledge.
Invocation.
Welcome — Mrs. Roy Hutchinson, President, Cook County.
Response — Mrs. George Kirby, President, Bureau County.
Credential and Registration Report — Mrs. S. M. Hubbard.
Convention Announcements — Mrs. Frederick Tice.
Roll Call.
Treasurer's Report.
Auditor's Report.
Annual Reports of Officers.
Annual Reports of Councilors.
Annual Reports of Chairmen of Standing Committees.
Annual Reports of County Presidents.

3:30 p.m. Address — State Medicine — Mr. J. W. Holloway, Jr., Director Bureau of Legal Medicine & Legislation, American Medical Association.
Adjournment until 9:45 a.m., May 17, 1944

**WEDNESDAY, MAY 17, 1944**

9:45 a.m. General Session — Palmer House — Club Section — Wabash Side.
Memorial Services conducted by Mrs. P. P. Youngberg.
Roll Call.
Credentials and Registration Report — Mrs. S. M. Hubbard.
Convention Announcements.

10:30 a.m. Symposium: PROBLEMS OF THE AUXILIARY — Mrs. Lucius Cole, Presiding
Resolutions — Mrs. L. A. Burhans
Final Report of Credentials and Registration — Mrs. S. M. Hubbard
Report of Nominating Committee.
Election of Officers.
Installation of Officers — Mrs. Herbert Henkel.
Response — Mrs. Alfred Gareiss.
Presentation of President's Pin.
Adjournment.

2:00 p.m. Post Convention Board Meeting — Mrs. Alfred Gareiss, Presiding.

# SOCIAL FUNCTIONS

**TUESDAY, MAY 16, 1944**

6:00 p.m. Dinner — Dining Room — Club Section — Palmer House.
Honoring the Advisory Committee of the Auxiliary to the Illinois State Medical Society — Mrs. W. J. Wanninger, Chairman.
Introduction of Honored Guests, Officers and Committees.
Greetings — Dr. J. P. Simonds, Past President of the Illinois State Medical Society.
Speaker — Dr. Everett P. Coleman, President-Elect of the Illinois State Medical Society.
Program — Readings and Musical Numbers — Mrs. Frederick Tice, Chairman.

**WEDNESDAY, MAY 17, 1944**

12:30 p.m. President's Luncheon — Foyer of the Grand Ball Room, Mrs. Roy Hutchison, Chairman.
Introduction of Past State Presidents — Mrs. John R. Neal.
Introduction of Guests and New Officers.
Greetings — Mrs. Eben J. Carey, President of the Auxiliary to the American Medical Association.
Address — Dr. Frank P. Hammond, Chairman of the Advisory Committee of the Auxiliary to the Illinois State Medical Society.
Medical Benevolence — Dr. Harold Camp, Secretary of the Illinois State Medical Society.
Address — Dr. J. J. Moore, President-Elect of the Chicago Medical Society.

2:30 p.m. Tea and Tour to the Art Institute — Mrs. S. T. Bolstead, Chairman.

# Correspondence

## ROBERT F. ZEIT MEMORIAL LECTURE

The first Robert F. Zeit memorial lecture sponsored by Xi Chapter Alpha Kappa Kappa Fraternity will be given by Howard T. Karsner in Thorne Hall, Northwestern University Medical School at 5 P.M. Thursday May 18th, 1944. The lecture is open to all. Following the lecture there will be a dinner for Alumni of the Fraternity at the Chapter House 70 E. Bellevue Place.

## ANNOUNCE GEHRMANN LECTURES

The Gehrmann Lectures for 1943-1944 will be delivered at the University of Illinois College of Medicine on May 17, 18 and 19, 1944 in Room 221 by Harold S. Diehl, M. D., Dean of the Medical Sciences, University of Minnesota, Minneapolis.

PROGRAM

May 17, Wednesday, 1 P.M. — The Common Cold: Cause and Epidemiology

May 18, Thursday, 1 P.M. — The Common Cold: Prevention and Treatment

May 19, Friday, 1 P.M. — Some Recent American Epidemics

## OPHTHAMOLOGICAL SOCIETY MEETS MAY 15th

The Chicago Ophthamological Society monthly meeting will be held on Monday, May 15th at The Medinah Athletic Club on North Michigan Avenue, Chicago. The clinical meeting at 5:00 o'clock will be followed by dinner at 6:00, and the scientific program at 7:00.

Visitors will be most welcome.

## TRAINED MEDICAL PERSONNEL NOW ON MERCHANT FLEET

CHICAGO For the first time in the history of the United States Merchant Marine, trained medical persons are now sailing abroad the freighters and tankers of our merchant fleet, according to Lt. Fred Edwards, U. S. Maritime Service regional public relations officer.

Almost two years ago officials foresaw the shortage of medical doctors that has prevented their assignment to sea duty in the merchant marine. To compensate, the U. S. Maritime Service Hospital Corpsman school was instituted at Sheepshead Bay, N. Y.

Men who qualify first receive 5 weeks "boot" training for their life at sea. Next they undergo a 12 weeks course learning anatomy, physiology, hygiene and sanitation, first aid, emergency treatment, nursing pharmacy and clinical laboratory.

Because they have to double as pursers in the merchant marine, the men next receive training to keep the ship's records. Then they graduate to assignment of 4 weeks duty in a Marine Hospital.

At the hospital, the Maritime Service hospital corpsmen proceed from department to department, applying their theoretical training. Upon completion of the entire 27 week course, the sea-going medical men are ready to "put to sea." As Junior Assistant Purser — Pharmacist Mate, the Maritime Service officer is a busy man, checking cargoes on entering and clearing ports — and maintaining ship's health enroute and for quarantine inspections.

# Original Articles

## VALUE OF SURGERY AND X-RAY TREATMENTS IN CARCINOMA OF THE BREAST

ROSWELL T. PETTIT, M.D., F.A.C.R.
Member Cancer Committee, Illinois State Medical Socity, Chairman, Advisory Board, Division of Cancer Control, Illinois State Department of Public Health.
OTTAWA, ILL.

A just criticism of statistical reports on carcinoma of the breast is that there is such an abundance of conflicting opinion that unless one goes into the subject thoroughly he may become more confused than instructed. This conflict of opinion is due not so much to inaccuracy as to the character of the disease and the wide variation in its classification by various surgeons — each apparently has his own opinion as to what is operable and inoperable.

In order to arrive at a just appraisal of any method of treatment it would be well to know the life expectancy in a large number of untreated cases. In view of the fact that the "5 year survival" has been generally accepted as the base line in judging the value of any form of treatment of cancer it is well to know how many cases of cancer of the breast will live this length of time if nothing is done for them. Because the rate of growth in cancer of the breast is so variable — some very rapid, others very slow, such an estimate of natural longevity can only be made by taking a large group of cases. Lazarus-Barlow[1] made a study and found that in 651 such untreated cases only 12% survived 5 years. Table 1.

TABLE NO. 1.
CARCINOMA OF THE BREAST, 651 UNTREATED CASES.
(Lazarus-Barlow).

| Survival Period (Years) | Per cent |
|---|---|
| 1 | 58% |
| 2 | 35% |
| 3 | 35% |
| 4 | 16% |
| 5 | 12% |
| 10 | 4% |

Having established this base line of 12% how much better do the patients fare that have been subjected to surgery? This question has also been answered in the same manner but the answers are conflicting. In 10,000 cases treated surgically in 23 different world wide clinics the 5 year survival reported varies from 16% to 52% with an average of about 29%. Table 2.

The conclusion to be drawn from these figures is that some surgeons are much more careful in the selection of their cases than others.

However, based upon reports on several thousand cases from three of our leading American clinics — Harrington at the Mayo Clinic, Portman at the Cleveland Clinic and Adair at the Memorial Hospital, New York where the selection of cases and surgical procedure from the standpoint of thoroughness is above reproach it is safe to agree with Adair[2] who says "It is recognized by those familiar with the results of radical mastectomy for cases of operable breast carcinoma that the 5 year "cures" are about 35% — only one in every three cases."

Therefore, who can question the value of surgery? A method that has raised the 5 year survival rate from 12% to 35% (300% gain) has

Presented before the Section on Radiology, 103rd Annual Meeting, Illinois State Medical Society, Chicago, May 18, 1943.

TABLE NO. 2.
SURGICAL CURABILITY OF CANCER OF THE BREAST.

(Portman)

| | Five Year Survival % |
|---|---|
| Deaver & McFarland | 26 % |
| Halstead | 28.9% |
| Steinthal | 33.3% |
| Schwarzkoph | 21.0% |
| Smith | 17.0% |
| Judd | 39.8% |
| Greenough | 22.9% |
| Bauchman | 23.5% |
| Deelman | 30.6% |
| Brostrum | 23.9% |
| Rahm | 15.9% |
| Lehmann | 28.0% |
| Iselin | 36.4% |
| Forgue | 22.0% |
| Perthes | 27.7% |
| Tichy | 20.9% |
| Hoffman | 28.5% |
| Peck & White | 39.1% |
| Neber | 21.0% |
| Lindenberg | 31.4% |
| Mills | 36.8% |
| Primrose | 44.4% |
| Watson Cheyne | 52.1% |
| Average, 10,000 cases | 28.8% |

certainly proven its worth. And, yet it is not uncommon for one to hear some surgeons say "What's the use? They all die any way." This is not true and has been proven, many, many times.

Surgical therapy — operability — depends upon the stage of the disease, especially the presence or absence of axillary involvement.

Adair[3] found that of 69 cases, when no axillary nodes were involved, 74.2%, five year salvage was obtained; in cases in which there was axillary involvement the 5 year salvage was 47.3% of 35 cases. He admits that these cases for surgery only were very highly selected and the results achieved are much higher than the average. Harrington[4] found at the Mayo Clinic that only 21.6% of 490 cases with axillary glands survived 5 years while 61% of 277 cases without glands lived 5 years. Of the total of 767 cases 35.7% survived 5 years — just about the average surgical success reported the world over.

These and many other figures prove conclusively that surgery is indicated and necessary in every case of cancer of the breast unless the disease is too far advanced (inoperable) or the general condition of the patient, (age, blood pressure, kidney, heart) preclude a radical mastectomy.

What is the value of x-ray therapy?

Pre-operative irradiation followed by radical amputation is preferred by many. Theoretically this should be the method of choice — knock cancerous mass mechanically. This was the plan of procedure at the Memorial Hospital, New York City for a number of years but the results were disappointing. 582 cases with operable cancer of the breast were treated with massive preoperative doses of x-ray, then six to eight weeks later operated on. Two hundred and thirty-six (236) of these had no axillary involvement and 69% had a 5 year survival. Of 337, with axillary nodes involved, 35.5% had a 5 year survival. These results are better than surgery alone in cases with axillary involvement but not markedly so.

The objection to this massive preoperative x-ray therapy is the length of time it takes — three to four weeks and the further delay for skin recuperation — frequently six weeks more — commonly a loss of time of two to three months. "Probably the good done by preoperative irradiation is more than overcome by the loss of time." Adair[3].

Post operative irradiation following radical mastectomy has shown much better results. The operation is done first and then as soon as the stitches are removed intensive x-ray therapy is instituted. In this plan there is no delay and there is no interference with wound healing. Again citing Adair[3], of 95 cases without axillary nodes, 76.8% survived while only 41.8% of 177 cases with extensive extension to the axilla survived 5 years or more.

Even though the percentage success of surgery drops sharply when the axilla is involved it is in these cases that post operative x-ray therapy has demonstrated its value. In these cases with axillary involvement, forty-two per cent is much better than the 35% achieved with preoperative x-ray and a decided improvement over the 21% for surgery alone reported by Harrington from the Mayo Clinic.[4]

Patients who come to the surgeon *before* the axilla is involved really have an excellent chance for recovery and in those cases with axillary involvement post-operative irradiation is of great value.

These figures would also tend to indicate that post-operative x-ray therapy is necessary only in cases in which the axilla is involved. However, Portman states that the pathologists have found 95% of the cases examined by serial sections have extension to the axilla whether the nodes are palable or not. An arbitrary differentiation between "axilla free" and "axilla involved" groups is therefore not warranted.

Most certainly cases in which the axilla is not apparently involved on palpation should not be denied the benefit of post-operative x-ray from an insurance standpoint if nothing else.

No one questions the importance of surgical technique in cancer of the breast; x-ray technique, skill and diligence are just as important.

Apparently this is not understood or appreciated by many surgeons who seem to have the idea you can expose any sort of patient to any sort of x-ray machine for any length of time — even a few minutes and get a good result. Knowing little or nothing of voltage, filtration, penetration, dosage, measurements, cumulative effects and biologic results with various kinds of x-rays upon normal and pathological tissues, some surgeons, and even some very large and prominent clinics using inferior equipment and obslete methods are inclined to belittle the value of radiation therapy in the treatment of cancer.

X-ray therapy properly administered in sufficient dosage has proven its worth to the same extent surgery has.

It is impossible in this paper to discuss technique in detail but in practically all my cases treated between 1928 and 1937 and reported in this paper the treatment factors were as follows:

Distance 50 centimeters
Voltage 200 KVP.
Filter 2 m. m. copper

Dosage — 200 R. (in air) per day for 10 days over one large field 20 x 20 cm. over the breast area including the axilla and supraclavicular space from in front and a similiar field over the axilla and scapula including the suprascapular area from behind directed forward. Attention is thus directed to the axilla and suprascapular and supraclavicular areas front and back with comparatively little attention paid to the post operative scar. In many cases radium at a distance of 3 cm. in a wooden block for a total of 2000 to 3000 Mg. Hrs. was also used. More recently, in cases with demonstrable axillary nodes supervoltage x-ray therapy (at 400,000 volts) has displaced the usual so-called deep therapy at 200,000 volts. These doses produce a very decided reaction in the axilla with redness, desquamation and usually blistering. Cross section and depth dose calculations are usually made and the tumor dose is estimated.

In this paper I wish to report on 193 cases treated between 1928 and 1937 and followed for 5 years or more. Of this number 149 were strictly post operative and are available for statistical study. Of the 193 cases treated only 6 were not traced. In thirty-eight cases, treatment was for palliation only, that is, cases with widespread metastasis or recurrence following previous operation or cases clearly inoperable before x-ray treatment was started.

Of these 149 cases, 87 survived 5 years or more — 58.3%. It is impossible for me to state exactly how many of these cases had axillary involvement as they were referred to me for post-operative x-ray by about twenty-five surgeons within radius of sixty miles of Ottawa and in a majority of instances I had no way of getting accurate reports on the operative findings but I do know from the reports furnished me that in the great majority of cases the axilla was involved.

These results, 58.3%, survivals of 5 years or more are certainly a marked improvement over the 35% reported the world over for surgery alone. The results are tabulated as follows:

TABLE NO. 3.

| | |
|---|---|
| Cases treated 1928 to 1937 | 193 |
| Cases rejected — inoperable, recurrences, etc. | 38 |
| Cases not traced | 6 |
| Available for study — post operative x-ray immediately after surgery | 149 |
| Cases surviving 5 years or more | 87 |
| Per cent 5 year survival | 58.3% |

## CONCLUSIONS

The conclusion may reasonably be drawn that the particular type of operation is not as important a factor as has been generally accepted.

The further conclusion is warranted that *intensive adequate* x-ray therapy directed to the axilla and supraclavicular areas markedly improves the chances for a five year survival in the average case of cancer of the breast.

These statistics further warrant the conclusion that: (1) x-ray therapy properly admin-

istered in sufficient dosage is an extremely valuable adjunct to surgery; (2) surgery and x-ray combined give the patient the best chance for permanent cure.

The surgical procedure is quite well standardized; not so with the x-ray. Marked improvements in x-ray therapy have been made and are being made, particularly during the past five years, and we have every reason to believe that if the five-year results on patients now being treated are compared with present group showing 58.3% success, the tabulated results would be considerably better.

But even on the basis of the present results (now five years behind), I think that we can feel that our results both surgical and radiological here in a rural section of Illinois compare favorably with results reported elsewhere — not excepting the larger clinics and metropolitan centers.

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3. Adair, F. E., J.A.M.A. 121: 553, 1943.
4. Harrington, S. W., J.A.M.A. 92: 208, 1928.
5. Portman, U. V., Am. J. Roentgenol. 27: 515, 1932.

## MEDICAL EDUCATION AND WAR

J. Roscoe Miller, M.D.
Dean, Northwestern University Medical School
CHICAGO

In discussing medical education and war, one must consider medicine as a whole rather than in any particular phase since the educational aspect is intimately concerned with every division of medical science, its application to the civilian population as well as the armed forces and to the still broader aspect of post-war reconstruction. The importance of medicine, and all it implies, to an army is now generally recognized. This has not always been so. It is a matter of unchallenged record that more soldiers have died of disease than of wounds inflicted by the enemy. Up until the war of 1914-1918, no campaign was ever fought in which the outcome was not changed or markedly altered by disease, and plagues and pestilence have more surely changed the course of human history than kings, dictators and generals.

Presented before the Joint Session, 103rd Annual Meeting, Illinois State Medical Society, Chicago, May 19, 1943.

During the civil war (1861-1864) 184,594 men died of wounds while 283,883 died of disease; nor did our record become much better forty years later in the Spanish American war when 5,423 died of disease as against 700 killed in battle. The World war of 1914 found many improvements in the medical care of the armed forces although in our own army deaths from illness exceeded those from battle casualties while of 204,765 discharged for disability only 25,187 were the result of wounds received in action. The outbreak of the present conflict saw all parties involved conscious of the importance of medicine as an essential and integral part of the war machine both in the field and at home. Scientific advances in the past decade bid fair to conquer, partially at least, the respiratory diseases which were a scourge in the last war. Additional knowledge of sanitation, epidemiology and nutrition will likewise improve the lot of those who remain behind the lines as well as the soldier in the zone of combat.

The number of trained medical personnel necessary and available at the outbreak of war is as definite and predictable as the requirements and availability of steel or any other commodity. Assuming that the army and navy require physicians trained in the same manner and of the same degree as during peacetime, a fact which has already been made clear, then the time required to prepare such physicians and the facilities for training this personnel are more or less fixed. At the outbreak of the war there were approximately 146,000 doctors practicing in the United States; this amounted to one doctor for every 758 individuals, or 1.5 doctors per thousand population. The British Isles, probably the country next best supplied with medical personnel and facilities, had 47,232 doctors in 1939; this figure including physicians in England, Wales, Scotland and Ireland. As compared with figures previously given for the United States, this amounts to one doctor for each 970 citizens or 98 doctors per thousand population.

The medical schools of the United States prior to 1940 were graduating approximately 5,000 physicians each year. This number went to replace the 3,400 members who left the profession through death, disability or retirement and added sufficient physicians to care for the increment in population, a small number for the

armed forces and a negligible number who went to other countries in various capacities.

The introduction of selective service which took place in 1940 and the decision to markedly increase the size of all branches of the armed forces made it immediately apparent that certain alterations were necessary in medical education. Although the American public is blessed with more and better trained physicians than any other country, this number in peacetime amounted to only 1.5 per thousand, whereas the requirements of the army and navy were set at the beginning of the selective service program at 6.5 doctors per thousand. This figure was an ideal and not an absolute necessity as has been shown by recent developments.

In the British army, where the ratio is approximately half the number called for in our original plan, the training of large numbers for the medical administrative corps has relieved the medical personnel of many routine duties not directly a part of medicine.

The physical facilities of the medical schools in this country were so utilized that any marked increase in enrollment would, of necessity, have resulted in the lowering of educational standards with subsequent depreciation in medical care for both the armed forces and the civilian population. As a consequence, to furnish the required number of physicians made necessary by an expanding army and navy, medical schools in the United States, wherever possible, adopted an accelerated program eliminating the long summer vacation period. Thus, without significant alteration, the prescribed medical course could be reduced from four years to three. After much deliberation and careful consideration, the executive council of the Association of American Medical Colleges recommended to member organizations under dates of December 18 and 23d, 1941 that member colleges, which could do so without lowering standards of medical education existing at that time, start an accelerated program of instruction on or about July 1, 1942. This applied not only to the utilization of the summer as a teaching period, but also to the interval at which freshman classes were admitted. It was further recommended that the accelerated program consist of four full academic sessions of not less than thirty-two weeks each and that graduation shall not follow sooner than thirty-five months after first matriculation as freshmen. This latter recommendation was in conflict with several state boards of licensure and as a consequence, the Association of American Medical Colleges requested that the Federation of State Medical Boards recommend to its members that they arrange to make whatever change was necessary in state licensing laws and/or board regulations to legalize the licensure of students graduating under the accelerated program adopted by medical schools to meet this national emergency. The last report regarding this matter showed that all but nine states had made the necessary alterations in their requirements so as to conform to this emergency measure. Of the nine only two have failed to introduce corrective legislation.

As rapidly as was possible, the accelerated program was adopted by the various medical schools until at this time all are on a fully accelerated schedule or some modification thereof. The estimated number of graduates of the approved medical schools in the United States for the three-year period from July 1, 1942 to June 30, 1945 under this new arrangement is 21,029 or 5,082 more than would have graduated without its adoption. Under normal conditions and without the accelerated program, the number of physicians during this same three-year period would have been 15,947.

In keeping with the desire to reduce to a minimum the time required to produce a doctor of medicine, alterations were further suggested in pre-medical requirements. As a consequence, the Council on Medical Education and hospitals of the American Medical Association under date of November 8, 1942 recommended that (1) the required pre-medical education including satisfactory courses in physics, biology and chemistry — including organic chemistry — shall be included within two calendar years of instruction, (2) the first year of pre-medical education shall be considered as a qualifying year for a medical course. At the termination of this first year, the student, if acceptable, shall be matriculated in the medical school. (3) Such a matriculated student shall be recommended for enlistment or commissioned in the army or navy to remain in inactive status during the second year of his pre-medical course, and until the completion of his medical training subject to his maintenance of adequate scholarship. (4) Med-

ical schools accepting students under these conditions will in no way jeopardize their status with any accredited agency. The Association of American Medical Colleges had adopted similar recommendations at their annual meeting held in Louisville on October 27, 1942. These recommendations involve a program providing for the completion of a student's medical education exclusive of internship within a period of five years after graduation from high school as contrasted with seven to eight years before the war. Thus the schools of medicine have participated significantly in the war effort by increasing the yearly supply of medical manpower.

While the faculties of medicine at the request of the surgeons general were striving to comply with the need for additional doctors of medicine, they were confronted with another obstacle. The Selective Service Act of 1940 contained no provision for the exemption or deferment of medical students as such. Since medical students were for the most part in the age bracket specified by Selective Service and were, therefore, eligible for military service, it was obvious that if the continued supply of physicians were to be maintained, some special provision would be necessary. Consequently a series of alterations and additions followed.

The Committee on Medical Preparedness of the American Medical Association urged that preparation for the conscription of the man power of this country should include provision for the continuation of medical education of students in medical schools and as interns in approved institutions. While arrangements were going forward for such provision, the navy announced May 26, 1941 that qualified medical students in the third and fourth academic year would be granted commissions as ensigns and placed on an inactive status and allowed to continue until they had completed their medical courses, including one year's internship, at which time they would be inducted into the medical corps of the navy with the commission of lieutenant, junior grade.

On May 26, 1941 authority was granted to the Surgeon General of the Army to commission as second lieutenants in the medical administrative corps after July 1, 1941 all male junior and senior medical students in approved medical schools who were fit for military service; also, to commission interns as first lieutenants in the medical corps reserve, with the understanding that they would be ordered to one year's active duty immediately upon completion of their internships.

While this improved the situation somewhat, it was still apparent that no provision was made for students completing their pre-medical training or in the first two years of medicine and, likewise, there was no assurance that students who had completed much of their medical training who were unfit to be candidates for a commission might not still be called out under the Selective Service Act. Under date of May 2, 1941 a Selective Service memorandum was sent to state directors which was worded as follows: "It is of paramount importance that the supply (of medical students) be not only maintained but encouraged to grow and that no student or intern who gives reasonable promise of becoming an acceptable medical doctor be called to military service before attaining that status. Local boards should remember that a deferment is not an exemption and that the obligation and liability for military service remains upon its expiration."

While assuring the continued training of medical students, this memorandum did not assure a continuation of material from the pre-medical schools as future candidates to the medical course. As a consequence, a Selective Service bulletin was issued under date of December 14, 1942 which read as follows: "A registrant who is in training and preparation as a pre-medical, pre-dental and pre-veterinarian or pre-osteopathic student pursuing courses in liberal arts or sciences in a recognized university or college may be considered for occupational deferment after completion of his first academic year in such pre-professional course, and thereafter if he is a full-time student in good standing, if he continues to maintain good standing in such course of study and if it is certified by the institution that he is competent and that he gives promise of successful completion of such courses of study in acquiring the necessary degree of training, qualification or skill."

To further assure an adequate supply of pre-medical students, the navy under date of January 1, 1942 and the army under date of February 11, 1942 extended the privilege of obtaining a commission in the medical reserve to bona fied pre-medical students who had been accepted by medical schools.

This long series of actions by various bodies has thus made it possible for medical education to continue uninterrupted. The lowering of the draft age to eighteen years November 13, 1942, however, again brought about the necessity for some provision to assure pre-medical and medical training since many students have not started their college training by the time they are called for induction, and few of those who have begun college have obtained sufficient training upon which could be based their acceptance to a medical school. This has lead to the formulation of a new policy by the army and navy — policies which have just been announced.

According to information available at this time this procedure in the case of the army will be essentially as follows: Upon reaching the age of eighteen a student physically qualified will be inducted into the army. He will then undergo the usual basic training requirement. At the end of this period, if he has indicated that he is interested in a medical education, he will be assigned to this duty provided his pre-induction scholastic record and his aptitude for medicine, as determined by numerous tests during his training period, indicate that he is a fit candidate. He will then be sent to a college probably in his service command which has contracted with the War Department to furnish premedical training. During the following sixty weeks he will be given courses in chemistry — including qualitative analysis and organic chemistry — biology, mathematics, English, physics and history designed to fulfill the minimum requirements for entrance to a medical school. During this time, of course, he will be a member of the armed forces in uniform and under the discipline of the army.

Each nine months the army expects to assign about 3,750 first-year medical trainees to medical schools who have government contracts. This will be approximately 55 percent of the total capacity of all approved medical schools.

The navy plans to assign about 1600 first-year students or 25 percent of the capacity of approved schools. Thus 80 percent of available facilities will be utilized by the two services, the remaining 20 percent to be filled by women and men who are not eligible for military training.

The student's status in the army will not be changed from the time he is inducted until he completes his education in a medical school. During this entire period he will be in uniform and will be considered a soldier assigned to special training. As such the expense of his medical education will, of course, be defrayed by the government.

Upon completion of the senior year, the student will be commissioned as a reserve officer and will be placed on inactive staus until such time as he has completed one year's internship in a civilian hospital. He will then be ordered to active duty. There is no plan to alter the curriculum and the training of the student will be the concern of the medical school except for a short period each week of about one hour in length during which the officer assigned to the campus will instruct the student in military matters. Information received regarding the navy program differs only slightly in detail from that outlined for the army.

From the above-described plan it will be seen that at the end of each thirteen-week basic training period a number of students will be available to medical schools. Obviously since the latter enroll classes at ninth-month intervals, they will not be able to accommodate these candidates immediately upon completion of their preparation. It is planned to overcome this difficulty by assigning these students to work in hospitals in their service command in various capacities such as laboratory assistants and orderlies until such time as the medical school in which they are to register matriculates the next class.

The date when the navy will institute this plan will be July 1. The army program will commence at the end of the academic period which terminates between April 15 and June 30, 1943, or if the academic period continues beyond the latter date, on June 30, 1943.

The armed forces can look to the civilian population for only a limited number of additional doctors since the majority of those physically fit for military duty have already been deflected to the services. As a consequence replacements and additions must come from the medical schools. The projected program will assure a constant and predictable supply of trained physicians.

Adequate material, however, is but one of the many problems facing medical educators today. While an adequate number of young doctors will be constantly available to the army and the navy and to a lesser degree to the civilian population,

it is obvious that no provision is made in these programs for providing specialist training and a long-continued conflict will inevitably make this an increasingly pressing problem. The armed forces in conjunction with the various civilian bodies concerned must make additional provision for this special training. A dearth of specially trained men will result in the lowering of the calibre of medical care offered soldier, sailor and civilian alike. Another serious problem which has developed is the maintenance of an adequate faculty in medical schools burdened by the largest enrollment in their history and under an accelerated program. As would be expected, the drain on these faculties, particularly the clinical branches, has been heavy and despite the program of the Procurement and Assignment Service it continues to be a pressing problem. In my own institution the loss of 200 men from the faculty to the armed forces makes constant alteration in teaching schedules and plans imperative. This drastic reduction in faculty suffered to varying degrees by all medical schools brings the number of personnel perilously close to the point where training will become noticeably deficient. I am of the opinion that this situation will become worse unless some new policy is adopted by the Assignment and Procurement Service or what seems more logical, that the armed forces assign to medical schools certain members of their faculty now on duty elsewhere. Few duties in the medical corps could be more essential than the training of additional medical men.

Scrutiny of the curricula at the various medical schools show the effect of the present total war. More time and attention is, of necessity, being given such subjects as tropical medicine, nutrition and sanitation. Since the graduates of any one class will be found in practically every quarter of the globe, the medical faculty must make sure that each student is versed in at least a basic knowledge of the sundry conditions to be encountered. What once was considered tropical medicine bids fair to be commonplace in temperate climes. The return of fighting men from areas where these conditions are common will bring to our shores abundant problems in diseases heretofore uncommon to us. We must also recognize the possibility of our having to furnish trained medical men for an exhausted and disease-ridden world at the conclusion of the conflict. Between 1918 and 1921 an impoverished Russia was swept by a great epidemic of typhus fever. It has been estimated that there were 25 million cases which occurred during this period in that country alone. It is not an impossibility that certain parts of the world will have similar epidemics after this more devastating war.

There is another phase of medical education which is generally overlooked at a time like this; namely, research. In general it can be considered a war casualty. While innumerable research projects referable to the emergency are being carried on in every medical school in the country, at the same time limitation of funds, deflection of personnel and increased teaching responsibility have markedly curtailed research. This is but one of the many penalties of war. Its importance is intangible and perhaps can never be measured, but any thoughtful individual appreciates that curtailment of the extensive research program in this country will have a definite and lasting effect upon the next generation as well as this one.

Like all aspects of human endeavor this war has called upon medical education for accomplishments unthought of a few years ago. I think that under the most exacting scrutiny it can be credited with an exceptional record of accomplishment.

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## THE VICE OF THE VIRTUOUS

The peculiarity of ill-temper is that it is the vice of the virtuous. It is often the one blot on an otherwise noble character. You know men who are all but perfect, and women who would be entirely perfect, but for an easily ruffled, quick-tempered, or "touchy" disposition. This compatibility of ill-temper with high moral character is one of the strangest and saddest problems of ethics. — *Henry Drummond.*

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Pulmonary tuberculosis is principally a disease of those between the ages of 15 and 45. This age group corresponds with that of the bulk of our industrial workers. This would, therefore, be particularly adapted to control by thorough industrial physical examinations followed by a sound and consistent policy of placement and medical supervision.—Wayne L. Rutter, M.D. and J. W. Dugger, M.D. Industrial Medicine, Jan. 1944.

# MEDICAL EDUCATION IN THE PRESENT WAR

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Dr. Miller* has given a very good summary of the sequence of changes in medical education since the introduction of Selective Service which took place in 1940. The accelerated program in medical education went into effect in most of the schools in United States by July 1942. On the whole there has been good cooperation between the enforcement officials of Selective Service, medical schools and the Army and the Navy.

It has been the hope of administrative officers of medical schools, the Council on Medical Education and Hospitals of the American Medical Association and the Association of American Medical Colleges that the old Student Army Training Corps of 1917 and 1918 would not be imitated during the present war. It was a well-known fact that the old SATC program where medical students were confined in barracks and subjected to the same degree of physcial drill as ordinary combat troups absolutely defeated the purposes of medical education. Everyone who taught and who was a student during these days knows that the education of a doctor during 1917 and 1918 underwent definite deterioration.

Yet a Memorandum of May 14th, 1943, to Medical School Deans, had the following statements:

> "Evidently the Army intends to barracks and mess medical students on a contract rather than commutation basis wherever arrangements can possibly be made to do so.
>
> Medical students in a number of schools hesitate to resign their MAC commissions until the conditions of enlistment in relation to living and feeding are known. As you know, students are not obliged to resign their commissions. Most medical schools evidently have not been notified whether they will be on a barracks or a commutation basis and are not yet in possession of the terms of contract covering this matter.
>
> We continue to urge the Army Specialized Training Division that all medical students be placed on a commutation basis which on the whole will interfere less with medical training, especially in the clinical years.
>
> The Navy will be on a commutation basis for all students."

It is the sincere hope that this confusion will be clarified in the next few days because it definitely interferes with the real work of the medical student and with the purposes of Selective Service in deferring the student for military service until he is qualified as a doctor.

Medicine is vitally interested in the premedical students. This source of supply must not be allowed to dry up. From all indications it appears that both Army and Navy officials recognize the essential status of the premedical student. Premedical students, if in college ERC, will be called to duty by June 30. From the Reception Center they will go directly to a Specialized Training and Reassignment Unit (STAR) in each Service Command for classification and assignment, i. e. for selection for Army Specialized Training Program and determination of level of assignment. From Specialized Training and Reassignment they will be sent to a college training unit (that has a contract with the Army) for completion of premedical training, or, if no more training is required, to a Replacement Training Center pending assignment to a unit at a medical school. Students already accepted by a given medical school may expect to be assigned to that school. Those not previously accepted by a medical school will be assigned where vacancies occur.

In the STAR Units, medical school representatives will serve as advisors and consultants. The Navy College Training Program is simpler and provides also for medical school representatives as advisors upon a central board of selection and assignment, the details of which are not yet available for distribution. The Navy has no preliminary period of basic military training such as that in the Army.

Although the new Army and Navy programs for medical education are expected to go into effect by July 1, 1943, this program has already been initiated by the Army in the University of Oklahoma Medical School. On May 4th, medical students were inducted into the Army as privates at the local Induction Center in Oklahoma City.

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*Medical Education And War. J. Roscoe Miller, M.D., Page 247 In This Issue.

Presented before the Joint Session, 103rd Annual Meeting, Illinois State Medical Society, Chicago, May 19, 1943.

They were then sent to Fort Sill, Oklahoma, where they were processed. This processing consisted of some introduction to subjects such as Military Courtesy and Discipline, and the Articles of War. Other phases of the processing included a series of Army Classification Tests, including the Army General Classification Test, being completely outfitted in uniform, and inoculation for smallpox, typhoid and tetanus.

The medical schools of the United States have a very definite place in both the present war and postwar efforts. In the first place, medical schools should understand that all of their efforts are a part of the war program. All our students should be prepared for active and competent participation in this war, either through military or essential civilian service. All able-bodied male students are destined for the armed forces. Already we have adopted an accelerated program and have increased the size of our classes so that we are producing a maximum number of doctors in as short a time as possible with our present facilities and without any lowering of present standards of education. However, the medical course should not be curtailed or shortened in any way, as it is absolutely necessary that our medical graduates be well qualified and capable. This takes time. No reduction in the standard of quality of our teaching can be permitted if we are to continue to produce safe practitioners of medicine. Nevertheless, it is incumbent on medical schools to modify their curricula in order to stress such subjects as military medicine, industrial medicine, tropical diseases, nutrition, first aid and public health, as has been stressed by Dr. Miller.

During the war, medical care, medical education and research will be put to a severe test in the evaluation of what is essential and nonessential.

First things must come first. Our immediate task is to win this war, which we will, even though the struggle be long and arduous. Although all of the previous ideals of this nation do not begin to outweigh the single purpose of winning this war, it would be a futile adventure if we found that we were victorious in war and that during peace we had lost our ideals of our American way of life. Our independence during time of peace is absolutely essential for the continued progress of medical education, research and medical care. The province of the physician is to supply adequate leadership in reference to the maintenance and the reestablishment of health in a bewildered and punch drunk world. This is a serious challenge. It will require initiative and courage.

Eben J. Carey,
Milwaukee

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## INVERSION OF THE UTERUS

Channing W. Barrett, M. D., F. A. C. S.
CHICAGO

A study of cases reveals:

1. That those cases returned immediately within a few minutes are accomplished easily and do exceedingly well with very slight exception.

2. Cases delayed two to three hours to a few days show a high mortality, some resisting return and many go into a stage unfit for return, and go into a state of invalidism for weeks before they are in condition for a late operation.

3. Cases with partial inversion, as evidenced by cupping of fundus, bleeding, shock and restlessness later, if not returned have complete inversion and herniation, in a few hours, a few days, a few weeks, a few years and one case was studied that continued 16 years before becoming complete.

4. In those latter cases immediate return is not usually feasible (a) because professional attendant is not at hand and (b) such changes have taken place that return would be very difficult if not impossible.

I have chosen the above subject not because it is common or because it is rare, but because when it is encountered it is usually met by a practitioner or midwife who is unsuspecting, is without experience, in fact, is apt to be facing it for the first time. What he does in the first few minutes is of utmost importance, and yet there are teachings in our text books and medical literature which if he could at the moment recall, would on the one hand lead to his confusion, and on the other boldly direct him in the wrong direction as indicated by the following quotation which is decidedly loose teaching.

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Presented before the Section on Obstetrics and Gynecology, 103rd annual meeting of the Illinois State Medical Society, Chicago, May 18, 1943.

"In actual reduction the problem of the adherent placenta is a difficult one. Removal of the placenta before reduction may cause an intractable hemorrhage. On the other hand the bulk of the placenta may make reduction mechanically impossible. No rule can be laid down except that the reduction should always be attempted before the placenta is detached. After reduction the placenta must be detached and this involves a serious risk of reinversion of the uterus to say nothing of the hemorrhage. In case the inversion cannot be reduced it is probably best to remove the uterus."

Inversion of the uterus is a term usually applied to the condition in the genital tract which in the alimentary tract is called intussusception (Cooke), that is, the uterus, usually at the fundus, is collapsed into the cavity, when by muscular effort of the uterus itself or by straining, or intra-abdominal pressure, or traction on the cord, or force exerted upon the adherent placenta, or by the expulsion and traction upon a polyp or tumor, the uterus is inverted from above or occasionally everted Adair from below. The fundus may remain cupped in the cavity of the uterus, or going a step further, it may enter the cervical canal and appear as a walnut sized or much larger rounded mass at the external cervical os, or any portion of the body of the uterus may project through the cervix into the vagina; or the inversion may continue, until all or nearly all of the uterus lies inverted in the vagina, or following this the vagina is very apt to invert until the uterus, bladder and vagina lie as a herniated structure between the patient's thighs on the bed cloth, whatever that may be.

The puerperal inversion stands in frequency to that of tumor origin in about the proportion of 4 or 5 or even 6, to 1. Those of tumor origin usually come later in life, when the uterus by reason of age and the effect of the tumor is rendered useless, and the treatment in most cases consists of picking the best possible time for doing a hysterectomy which may be immediate or after some preparation.

The puerperal inversion is more dramatic. The patient usually comes to the end of the second stage of labor with no abnormality having been noted, when suddenly a combination of the normal and abnormal, results, not in normal contraction but in relaxation and then turning of the fundus of the uterus outside in, a moderate degree of which is partial inversion or beginning intussusception — a larger degree, a more marked inversion or a more extended intussusception. The inverted uterus lying in the vagina is a prolapse of an intussuscepted uterus. When the genital structures are cast between the patient's thighs, we have intussusception or inversion of the uterus, which by reason of being expelled out of the abdominal cavity through the anterior pelvic floor cleft, has become a marked and well defined hernia.

The typical condition is well illustrated by the following case:

Mrs. B. Age 27. First delivery, which was in her home in 1904. Married 2½ years. Normal, healthy appearance. Slight mitral regurgitation with compensation. Labor normal, short and easy. Cord short, scarcely permitted child to be extruded. While trying to keep the child from making traction on cord, the inverted uterus was extruded from the vulva with the placenta still attached. Cord was quickly severed. The placenta was gently swept off the uterus. The uterus was quickly washed with lysol solution. Patient had very little hemorrhage, no marked shock, and was not frightened. I told the husband what had occurred, and immediately carried the uterus back into the vagina which had become a part of the outside mass. With the vagina replaced and the inverted uterus in the vagina, the fundus was held in the right hand, the fingers of the left hand following down to the junction of the cervix and vagina, finding the place where the cervix most readily turns in. This is easily accomplished. The right hand causes the uterus to follow up. This is all accomplished without anaesthetic and without complaint. When the hand was removed, the uterus followed down but was not permitted to come outside. It was easily returned and was then controlled by the outside hand as described elsewhere. The patient says she had a slight "sinking" spell and was given a glass of wine 15 minutes after the baby was born, or ten minutes after the return of the uterus. She made a recovery without incident, and gave birth to a second child 22 months later.

This condition does not occur to any great extent in well supervised obstetrical clinics. Large clinics may be carrying out an important prophylactic treatment, for most of these cases are preventable, but it is the unsuspecting attendant who faces the actual disaster, for to have a case that has neared a successful termination, in a matter of a few seconds join a class of cases that show a mortality of 15% to 45%, with a high percentage of morbidity, and in these young women a high percentage of hysterectomy and frequent sterility, even though the uterus be left, is startling to the inexperienced attendant.

Changes now take place so rapidly that if the attendant fails in the next few minutes, the opportune time passes.

The unfortunate circumstance occur with perhaps a single or a combination of unfavorable happenings. There are several natural conditions which make the occurrence easy. A uterus of nine months pregnancy size, perhaps even more distended by multiple fetation or hydramion, or a very large or deformed fetus. The uterus is now a large hollow organ with a cavity almost as large as the outer dimensions, or in other words with a very thin wall which is very flaccid and floating, with no sustaining structure, with only its alertness and agility in contraction to maintain its form. At the end of the second stage the patient oftentimes suffers delayed or arrested function, and contractions cease. There is nothing to sustain the contour of such a large sized flaccid sac. Traction on the cord, especially if the placenta is attached to the fundus, or pressure upon the fundus, or straining of the patient, especially if the body is raised or the patient is raised on her knees. With the removal of the fetus and fluids there is a suddenly removed counter-pressure on the inner wall of the uterus, with a natural collapse of uterine walls, which can only be prevented by adequate contractions. In the absence of such contractions the open sinuses and negative pressure contribute to a sharp flow of blood and plasma is lost. The rapid removal of the fetus, and again the rapid removal of the placenta, results too in a suction process which may leave behind them a negative pressure which causes the most movable portion of the collapsed sac, the uterine fundus to follow the outgoing structure, especially if the placenta is still attached to the movable fundus. No effort should be made to expel the placenta when the uterus is soft and collapsible. Rather the abdominal hand should be placed edge-wise transversely between the pubic bone and the uterus, the instant an indistinctness of the fundus is noted. This is best carried out, and every change in the uterus put under control if a forceps grasping the cord is held gently in one hand, so that the cord is slightly taut, while the other hand palpates the fundus, with the thumb reaching toward the cervix. In this way the degree of contraction, any undue softening or collapse of the uterine wall, is known at once to the operator, when the abdominal hand is placed as described, to prevent descent of the uterus. This measure puts everything under perfect control and inversion could hardly take place. Any cupping of the fundus should be met by the vaginal hand, and pushed back into regular contour, and in such case the hand should be withdrawn slowly, for the uterine wall needs the support until contraction occurs and, further, rapid withdrawal may cause the fundus to follow the hand by suction of removal.

*Etiology of Inversion*

1. *Passive*
   - a. Exhaustion, due to overexertion or loss of blood.
   - b. The soft, collapsible tissue condition is favorable.
   - c. Arrested contractions.
   - d. Anaesthesia.
2. *Active*
   - a. Traction on cord.
     - (1. Short cord.
     - (2. Cord around body.
     - (3. Traction by attendant.
   - b. Traction on placenta.
   - c. Pressure from above, including too active or faulty Crede.
   - d. Straining, especially with the patient standing or on knees or with shoulders raised.
   - e. Spasms of sneezing, as with snuff, or coughing.
   - f. Traction upon the cupped fundus, thinking it was the placenta.
   - g. The pull of, or traction upon, a polypoid tumor.
   - h. House deliveries, with the mother and child needing attention at the same time, subjects each to extra risk.

*Diagnosis.*—The disappearance or cupping of the fundus calls for investigation.

Unusual bleeding or shock.

A mass projecting into or through the cervix, perhaps covered with placenta or showing openings of Fallopian tubes.

A large globular mass in the vagina with ring of cervix above.

The complete herniation of the inverted uterus and vagina, and in the inverted uterine cavity the tubes and ovaries, and with the vagina the bladder is partially or completely herniated. The placenta may still be attached, usually to the fundus, or it may have been previously removed.

*The Situation for Consideration.*—In the vast majority of cases studied, the patient could be considered normal until a few moments previous to inversion. Therefore, as nothing is torn or greatly traumatized, nothing is greatly at fault

except the position; but starting from the moment of inversion, unfavorable circumstances take place rapidly.

1. Hemorrhage — but this is quite variable and in some cases is not at all alarming.
2. Shock may appear rapidly and may be profound, but is also variable.
3. Contamination with, later, infection.
4. Circulatory disturbances with swelling, oedema and later possible gangrene and necrosis.
5. Urinary disturbances with retention, kinking of and pressure upon the ureters, and resulting uraemia.
6. Pressure upon entrapped ovaries and tubes with at times rapid swelling, contributing to shock.

It is important to note that in the vast majority of cases of sudden inversion with complete herniation, the condition has taken place so rapidly that there has been no time for hemorrhage, shock, sepsis, oedema or uraemia, but this cannot long continue. A bold and gentle hand is needed to return the organs to position nearly as quickly as they were extruded, when in most cases the puerperam progresses as normally as though the inversion had not taken place, and the patient is saved to health and future childbearing. This has been readily accomplished by inexperienced physicians, midwives, nurses, and by veterinarians, the latter having a more difficult task.

There are three periods for the treatment of inversion:

1. The immediate period when hemorrhage, shock, sepsis and swelling and contraction ring in no way prevent return. If this condition is so rapidly going to bring about these evils, the effectual way to treat what has occurred mildly and what may occur severely, is to return the uterus to position, immediately. In some few exceptional cases the conditions remain normal enough that return may be accomplished a few hours or a few days after occurrence, but in delayed cases great care should be exercised lest we add to the risk of hemorrhage and shock.
2. The intermediate period, when hemorhage, shock, sepsis, oedema, swelling and contraction ring has rendered the patient unfit for such an effort as would be required to return the uterus to its proper position, if such return might be possible. Delay may have already resulted in death or promises a fatality. Too active treatment in these extreme cases will result in further mortality. It is too late for immediate return and too early for the late return. We now enter into a long, tedious preparation for a safe period, but it is beset with great morbidity and considerable mortality. In a typical case, shock, anaemia, swelling, oedema, sepsis and uraemia must be overcome before the patient is ready for a safe third period. It is unfortunate that hemorrhage and shock must be treated while the conditions which caused them still exist.
3. The late period, that of complete subsidence of the evils, which are absent in the first period and so noticeably present in the second, and which may never be reached, but should be sought by the judicious use of blood transfusions, and plasma, the sulfa drugs, antiseptics, posture, involution, etc. When the temperature is normal, the blood count satisfactory, shock has disappeared, the pelvic organs have returned to normal size, the uterus may be returned to position or removed. In fact, there have been a few cases reported in which spontaneous reposition has taken place during the second stage.

Usually, however, such contraction has taken place at the cervical ring and contents of the uterine cup have become so adherent that nonoperative return is not feasible, the tenderness of tissue contributing to the impracticability of efforts at return. The English favor the use of Avelines cup instruments, but usually a vaginal incision is made and the uterus slit anteriorly or posteriorly and turned so that the peritoneal surface is again outside. Some prefer an abdominal operation and some prefer the vaginal, and some resort to a vaginal or abdominal hysterectomy.

When this period of a comparatively safe operation has been reached or an unsafe operation is forced, the patient has usually gone through weeks, and often months, and occasionally years of invalidism, so that a semblance of restoration to health outweighs any question of saving a doubtful uterus. The mortality of the second and third periods have been high, but with better means of combatting the dangers of the second stage, and better preparation for the third, the mortality should be reduced, but the long and dangerous period of invalidism and the final operation with considerable mortality, together with the loss of the uterus and the considerable percentage of sterility, serves but to emphasize the striking advantage of a quick replacement of the herniated, inverted organs while they are as normal as when the inversion occurred a few moments previously. McLennon and McKelvey have made a contribution to the late treatment of uterine inversion, but this in no way takes the place of the advantages of immediate return.

We would in this connection emphasize cleanliness, gentleness, promptness, thoroughness, sureness, and may we add that returns of inversion have frequently occurred because the oper-

ator removed the intra uterine hand before contractions took place. The abdominal hand should always be pressed deep above the pubis until the uterus becomes controllable. Packing of the uterus and vagina is sometimes desirable.

While many of our collected cases have been returned immediately with a high percentage of good results, many incomplete cases have been delayed by failure of diagnosis. A recent report was made upon a case in which the fundus was missing, hemorrhage and some shock was present. A mass was thought to be in the broad ligament, and yet this patient went on to 14 weeks of invalidism, and two perineal repair operations undertaken, because of failure to recognize the condition. Maxwell's case had the uterine fundus projecting from the vulva for three days, became very septic and necrotic. Return was made during this condition, septic emboli followed, resulting in death. This would come very definitely under the ruling that it was too late for immediate replacement and too early for late operation. Carruthers case. Mrs. G. Age 23. 2 para. Child born at 1:30 A. M. Returned at 3:00 A. M. Death at 5:00 A. M. from severe shock. A few cases have died in the early hours with no treatment, but as these patients die from hemorrhage and shock, immediate return would almost certainly have saved them, as could well have been the result in Carruthers case. Cases with marked acute anaemia and profound shock are the result of too long delay, as there is no occasion for these conditions to be marked at the time of inversion. Some cases delayed, have not developed such shock and anaemia, but sepsis has developed, and oedema and swelling with a contraction makes efforts at return impracticable, and perhaps dangerous. There are cases seen seemingly fairly early, in which considerable shock and hemorrhage has occurred, and in which either course chosen is followed by such dire results that one might wish he had chosen the other course.

Townsend-Whiting et al report a case in which feeble contractions follow delivery, but placenta was expelled unaided, some bleeding with clot which was expelled by compression by nurse; pain continued, becoming stronger and more expulsive. At 1:00 A. M. uterus found extruded from vulva. At 3:00, two or more hours after return was possible, uterus was measured and found to be 9 in. transversely and 10 in. longitudinally, and yet with some effort it was returned, and after rise of temperature to 101 and 102, made a good recovery after removal of packing.

The reports of veterinarians on inversions in mares and cows are most interesting, and run quite similar to our experiences in the human, except no second and third periods are granted. If replacement is not accomplished early, the animal dies from shock, gangrene or sepsis.

The uterus partially or completely inverted can practically always be replaced by an attendant who makes a diagnosis and has presence of mind, and the patient's life is saved and a long, distressing and dangerous invalidism is avoided. Kline calls attention to the case of replacement of the partial inversion in the cow as being easily reduced.

If one waits for consultation, etherization, transfusion of blood or plasma, removal to hospital, shifting of responsibility, the advantages of immediate period are sacrificed, and since this is the period of greatest adavntage to the patient, I would emphasize:

1. A clean confinement, including a clean vagina
2. A quick lysol solution wash of all parts, including the vagina and all extruded organs
3. Catheterization
4. Quick, gentle removal of placenta from the uterus
5. Quick lysol splash of the uterus
6. Gather the uterus in both hands and push it gently into the vagina
7. Holding the fundus with one hand, let the fingers and palm of the other hand slide down the length of the uterus to reach the cervix
8. Search for the cervical area that most readily starts reinversion, and follow up with the fundal hand to hold what is gained and seek to turn in adjacent areas
9. Continue until the hand is in the uterus and contraction is taking place

At this early time with the cervix once started, the whole uterus easily follows. One does not, of choice, try to start the reinversion from the fundus, as has been recommended in text books. If a low position of the head and a high position of the buttocks is feasible, gravity will be a good assistant to hold what one gains. Hippocrates appreciated the value of the inverted position on a ladder. One should not be hasty in withdrawing the hand, letting contractions return, then partial withdrawal with two fingers in the uterus, in the meantime shutting off the exit of the uterus by pressing the free hand deep above the

pubic bones, and holding it in this position until the vaginal hand is withdrawn. A second inversion greatly increases the danger of hemorrhage, shock and contamination, and should be prevented if possible. This tendency is considerable and may occur by relaxation after considerable contraction, and will bear watching, as a return of inversion after the attendant has left is, or may be, a disaster.

Packing of the uterus and vagina is sometimes desirable. A placenta forceps carrying a tennis ball sized wad of gauze may be carried into the cavity of the uterus. The next day the patient may be expected to be as well as though this accident had not happened.

While the intermediate and late treatment have their place in neglected cases, there is nothing they can offer to compare with the return before hemorrhage, shock, sepsis, swelling, contractions and adhesions have taken place. Spontaneous return to normal has taken place in neglected cases, but hardly often enough to furnish a hope.

Inversion of the uterus after childbirth usually has its beginning at the time of delivery during the third stage, but has not always been discovered, for hours, days, weeks, months, and in rare cases, even years. Profound comfort and absence of symptoms is so characteristic of the immediate post delivery period, that continued pain with hemorrhage, some shock, restlessness, should cause one to be suspicious even though he has overlooked the cupping or absence of the fundus. Going back and finding the rounded fundus absent makes the diagnosis too probable to be neglected, until that later period when complete herniation of the inverted uterus shall prove one's oversight — in one case 16 years later.

Only about two to three percent of inversions take place in well organized clinics, so that the immediate treatment is to be carried out by the attending practitioner. Intermediate and late treatment should have the advantages of a hospital with expert care, but experts arrive too late for the advantages of immediate treatment, except in the minority of cases. The practitioner, the nurse, or the midwife who can get results, is better than an expert 100 miles away. Home deliveries will be more common, with less skilled attendance for the duration — these emergencies must be met.

Exhausting labors, previous hemorrhage, profound shock, such as occurred in Holmes case of placenta previa, may render an occasional case unfit for immediate treatment, but this does not apply to the majority that are in good condition up to the moment of inversion. Most of the cases having inversion hours, days or weeks after delivery, had partial inversion at the time of delivery, and could have had an easy return, but allowed to drift are almost certain to have complete herniation, with the likelihood of second, and third period treatment, with prolonged invalidism and possibly a mutilating operation.

Phemister's experiments on animals led him to lay more stress on stopping the cause of shock than on administration of fluids to combat the shock. This would seem to have significance here where a condition which causes the shock is allowed to persist while relief is sought through fluids, oftentimes not readily at hand.

## CONCLUSIONS

1. Puerperal inversion is met primarily by a general practitioner or midwife.
2. Puerperal inversion is largely preventable if one can give it undivided attention.
3. In most cases, shock and hemorrhage have not taken place at the time of inversion.
4. Immediate return is almost always possible and usually easy, and frequently does not require anaesthesia more than that which has been employed for the delivery.
5. Care should be exercised to avoid traumatizing the ovaries and tubes which are in the cavity of the inverted uterus.
6. A reinversion is to be avoided as directed.
7. Patients may be expected to be immediately well after an early replacement.

## DISCUSSION

Dr. James H. Bloomfield, Chicago. — I am glad to have the opportunity of discussing Dr. Barrett's paper on Inversion of the Uterus. He has presented his subject in an interesting and educational manner, in regard to the etiology and treatment.

I would like to state that Dr. Barrett has classified hemorrhage as the most important diagnostic and systematic factor, while I believe shock should be placed first. In a great many cases of inversion of the uterus, there is very little hemorrhage, especially in those cases in which the placenta is still attached. I believe that you will find that the amount of shock is greater in proportion than in any other condition from an obstetrical standpoint. There are certain cases in which hemorrhage may be the predominating factor. The

combination of shock and hemorrhage in the early stage is what causes the usual fatal results.

It is also true that a great many of these cases go undiagnosed especially if the uterus is not completely inverted. The inversion may complete itself any time within several hours after delivery and may go on for several weeks in some cases before a correct diagnosis is made.

From the number of cases that I have seen, I believe that the predominating factor in causing inversion of the uterus is faulty conduct in the third state of labor, whether it be too brisk massage, faulty crede expression, or abnormally strong pull on the placental cord.

In regard to the treatment of these cases, there is one important factor that I believe Dr. Barrett has left out, and that is the use of adrenalin before attempting replacement of the uterus. I believe that you will find that 15 to 25 minims injected intramuscularly and then waiting for about 10 or 15 minutes, will make replacement of the uterus much easier.

In acute cases when the placenta is attached, all preparations for surgery should be made before the placenta is removed as it is necessary to remove the placenta before the fundus can be replaced. Everything should be in readiness and the placenta removed and manipulation should occur as soon as possible in attempting to replace the fundus.

Dr. Barrett's discussion of starting at the internal os and feeding the uterus through the cervix is the correct procedure. Do not attempt to push upward on the fundus itself as it becomes so bulky that it will not readily return. This can usually be done with one hand in the vagina and the other hand placed over the symphysis to give counter pressure. Once the uterus starts back through the cervix it usually returns very easily. I believe that a pack should be placed in the uterus and no attempt should be made to remove it for 48 hours and then only part of the pack removed and the remainder removed at two or three intervals extending over the next 24 hours. This will help the uterus to contract well and with less danger of reoccurring inversion.

The three stages in regard to treatment that Dr. Barrett spoke of, the immediate, the intermediate and the late, I believe we are perfectly safe in leaving out the intermediate period. The best time is immediately after inversion takes place. The uterus is replaced more easily, there is less danger of sepsis and it lessens the shock. In a number of cases, the late period seems the proper time. In these cases, I have seen it as late as six weeks after delivery. Here it is impossible to reinvert the uterus and it usually requires operative procedures. I prefer the Spinelli operation instead of the abdominal type. I have seen cases in which pregnancy followed inversion of the uterus.

There have been few cases reported in which repeated inversion of the uterus has taken place. With a history of this kind, the obstetrician should be well informed and the case should be watched closely during the third stage.

These cases carry a high mortality rate and many go undiagnosed as shown by the Health Department records.

I wish to thank Dr. Barrett for the opportunity of discussing his paper. I am sure that his talk on Inversion of the Uterus will be of great value to the general practitioner especially.

Dr. John J. Gill, Chicago: I have within the present month had a case of subacute inversion of the uterus and I reported a case of acute inversion several years ago (Am.J.Obst. and Gynec., Sept. 1930). I think the cases are not as infrequent as reported in the literature — one in several hundred thousand deliveries. I personally know of four other cases.

In the recent case, the patient was reported to have had a normally contracted uterus up to the fourth day. On that night the nurse reported that she could not feel the uterus; the woman was in shock and bleeding profusely. By the time I arrived she was coming out of the shock. She was given plasma and glucose in saline; the next morning, a transfusion of her husband's blood. Then the uterus was replaced by holding the inverted uterus in my right palm, using the right index finger to dimple in the left upper portion, while gradually squeezing the fundus through the cervix into position and holding my hand there while inserting the gauze packing.

The case which I had previously reported was of quite a different type: The patient while coming from under the anesthetic, was straining and retching as we waited for the placenta; suddenly the uterus inverted and appeared between the thighs with the placenta plastered over the entire surface and no line of cleavage. In this case I bored a hole through the center of the placenta, peeling it loose, and with my hand cone-shaped, reinverted the uterus at once and inserted the gauze packing as I removed my hand.

The gauze was removed within twenty hours in each case.

Both patients made uneventful recoveries.

Dr. Barrett: I am grateful to those who discussed the paper. I would be inclined to decide that Dr. Bloomfield did not get the information that he is giving us from the textbooks, because the textbooks are nowhere near that close to being right. I would be even inclined to concede the statement he made that shock ought to be first and hemorrhage second. They both ought to be mentioned. It would seem natural that hemorrhage should be mentioned first, but I would not be particular about which one would be given first place. If hemorrhage were the chief or only cause of shock it should rate first place but as there is shock without much hemorrhage, shock is not out of place in first position.

The one point I wish to make is that anybody practicing obstetrics is liable to run across a case in which he is either going to have an inversion of the uterus or he must treat it prophylactically.

It is a condition for treatment where and when it occurs. It is not a condition that will permit the patient to be conveyed to a clinic 100 miles away. I would rather have a level headed nurse in a case of that type than a trained obstetrician 100 miles away, because the chances are that the patient is going to die if you wait for the obstetrician that is 100 miles away, or if they escape the great danger of the first few hours, then they go into a long period of preparation and perhaps they never get ready for that good third stage operation. It may always be a dangerous procedure that is going to be carried out at some time. So, I am trying to bring out the fact that this is a bedside man's job. It is not for a man who is running a great clinic to determine, because the men who have run the big clinics say they have had 250,000 deliveries in their clinics and have never had a case of this type. It is not an expected trouble; it is an unexpected trouble of a general practitioner or midwife and if the attendant has not presence of mind and a little skill to put the uterus back in, he is going to have some trouble. If he has some good common sense and the ability to realize that the uterus has inverted, and put it back in immediately, then the patient is just as well the next day as though she had not had that incident. Otherwise, that is not the case. Most of the cases that the Health Board saw died within a few hours, and some of them had good doses of plasma and blood. This minute, this second, the patient is well and expects to be over it and the doctor expects to be on his way, the next instant the uterus is out there, the next instant it should be back or trouble increases by the minute.

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## SUCCESSFUL SURGICAL REMOVAL OF SPLEEN OF A PREGNANT WOMAN

The successful surgical removal of the spleen (splenectomy) of a woman eight months pregnant is reported in *The Journal of the American Medical Association* for March 18 by David Polowe M.D., Paterson, N. J. The pregnancy was complicated by a disease of the blood in which there are hemorrhages beneath the skin forming purplish spots (thrombocytopenic purpura hemorrhagica) and which is accompanied by a tumor of the spleen. In the case reported by Dr. Polowe, a large tumor was found in the spleen. The operation was performed on October 27 and on November 29 the patient was delivered normally of a normal female infant about two weeks prior to estimated term.

As Dr. Polowe points out, thrombocytopenic purpura hemorrhagica is a very serious complication of pregnancy, with fetal mortality rates running as high as 64 per cent and maternal mortality rates almost 100 per cent.

## STANDARD VITAMIN MIXTURE AVAILABLE

For those who desire effective vitamin mixtures not disguised by a multiplicity of nonrevealing and frequently suggestive names, two mixtures have been added to the United States Pharmacopeia, *The Journal of the American Medical Association* for April 1 reports.

The value of vitamin mixtures in multiple vitamin deficiencies," *The Journal* says, "is well established. Numerous communications have provided much information on the administration of these mixtures; the Council on Pharmacy and Chemistry [of the American Medical Association] has outlined the type of mixtures that will be found acceptable for inclusion in New and Nonofficial Remedies [published by the Council]. Two such vitamin mixtures, Hexavitamin and Triasyn B in capsules and tablets, are described in the first bound supplement to U. S. P. XII. . . ."

Hexavitamin *The Journal* explains, contains vitamin A from natural (animal) sources, vitamin D, ascorbic acid, thiamine hydrochloride, riboflavin and nicotinamide. Triasyn B consists of thiamine hydrochloride, riboflavin and nicotinamide. Pointing out that these are important additions to U.S.P. XII, *The Journal* says that "The next step will be for the physician to prescribe such compounds for his patients so that they may be obtained from the pharmacist."

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A man stricken with tuberculosis is just as much of a loss to the nation for whom he might otherwise be working or fighting as a man blasted with shrapnel. — Lt. Comdr. Emil Bogen, M.C. U.S.N.R. Am. Rev. Tbc. Mar. 1944.

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The prevention of disease and the prevention of war are today the two great world problems. The way is pretty plain in this matter of war, be it against a pathogenic microbe or against a pathologic nation of people. As we have organized preventive medicine, we must organize preventive war. In medicine we do not talk about peace with the disease, with the parasites, with the tubercle bacillus, for example. We do not propose to write a peace treaty with these causes of disease. We do not sit around a peace table with our disease-producing enemies. We wage continuously either an active or preventive war. We should have a continuous preventive war program fashioned along the lines of our continuous preventive disease program.—David John Davis, M.D. Diplomate Jan. 1944.

# Industrial Health

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## INDUSTRIAL TOXICOLOGY AND INDUSTRIAL POISONING*

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*Introduction.* — This subject deals with the body of knowledge pertaining to poisonous compounds to which industrial workers may be exposed in the course of their regular occupations. It is a very large body of knowledge and is rapidly growing, but it is inadequate in view of the extensive development of the chemical industries in the United States.

Industrial intoxications as a group are of greater hygienic importance than their reported incidence would indicate, because of their often prolonged character, and their effects upon the stamina and morale of industrial workers. Under suitable conditions they seriously interfere with production.

The present discussion concerns itself with brief references to those aspects of the problem that would seem to be of the greatest practical assistance to physicians in and out of industry who may be called upon to see and care for cases of industrial poisoning, namely:

I. Certain general clinical characteristics of industrial poisoning.

II. Clinical classification of industrial intoxications and brief discussion of each.

III. An interpretation of current investigative procedure in the field of industrial toxicology, and the results of such investigations.

*Presented at the Postgraduate Course in Industrial Medicine and Hygiene, University of Illinois, College of Medicine.

### *Clinical Considerations in Industrial Toxicology*

I. General Characteristics of Industrial Intoxications
- 1. Multiple occurrence in a specific occupation
- 2. Onset
  - (1) Usually more or less abrupt
  - (2) Usually unrelated to precedent illness
- 3. Course
  - (1) Usually associated with a general illness, characterized by functional or metabolic disturbances with little actual tissue destruction, and associated with:
    - (a) Loss of weight
    - (b) Weakness
    - (c) Lassitude
  - (2) Usually afebrile except in terminal stage.
  - (3) Usually greater disability than organic involvement would appear to justify. As the pathologist suspects poisoning when the morbid anatomy does not fully explain death, so the clinician may suspect it when dramatic functional impairment is unaccompanied by adequate signs of organic disease.

II. Classification of Industrial Intoxications
- 1. Acute or Chronic
  - (1) Acute —
    - A. Diagnosed by history — usually sudden onset — related to
      - (a) An accident
      - (b) A new process
      - (c) An old process in inexperienced hands
    - B. Diagnosed by clinical study — Prompt development of involvement of
      - (a) Central nervous system
      - (b) Gastro-enteric tract
      - (c) Liver
      - (d) Kidneys
      - (e) Blood
  - (2) Chronic —
    - A. Often a misnomer, and not so likely

to be a low grade injury as a more severe one that has taken some time to appear, either because a cumulative poison has taken time to reach an injurious concentration, or because a series of minor or subclinical injuries reach a point at which serious organic dysfunction occurs.

B. Prodromal symptoms usually are noted.

C. Suggestive signs of absorption of some poisonous compound appear — e.g. pigment deposits (lead, bismuth) — hematologic changes (anemia, leucopenia, stippling, hemolysis, methemoglobin), abnormal execretory products (heavy metals, ethereal sulfates, etc.)

D. Condition is likely to resemble other diseases in many respects. Therefore, differential diagnosis depends upon

(a) Broad clinical knowledge

(b) Careful and complete examination

(c) Going to place of employment or to management or the plant physician for detailed information about the possibilities for exposure

(d) Exercise of sound unbiased judgment

2. Classification according to systems involved

(1) Central Nervous System

A. Narcosis

(a) Compounds are volatile organic substances — alcohols, ethers, etc. absorbed principally by inhalation

(b) Similar compounds low in volatility usually, and also soluble in fats in the main are absorbed readily through the skin. There are notable exceptions such as phenol, and chlorphenol and the water soluble salts of phenols which are also absorbed through the skin.

B. Asphyxia

Without pulmonary injury or edema and without changes in the blood. Specific CNS poisons — HCN — HS

C. Excitation — Encephalopathy

Tremor

Apprehension — emotional instability

Insomnia — lurid dreams

Hallucinations

Mania

Convulsions

Alcohol, gasoline

Halogenated hydrocarbons

Organo-metallic compounds

Lead, Manganese, Cadmium

Mercury

(2) Peripheral Nerve Lesions

Optic — Methyl alcohol, lead arsenic

Extensors of extremities

Of arm — lead

Of leg — arsenic — orthocresyl phosphate

(3) Gastro-enteric tract — Lead

(4) Blood and blood forming organs

Benzine — bone marrow

Lead — bone marrow

Aniline — methemoglobin

Arsine — hemolysis

Carbon monoxide — carboxyhemoglobin

(5) Kidney

Carbon tetrachloride — Mercury

Ethylene glycol

(6) Heart and peripheral vessels

Nitro compounds

(7) Liver — carbon tetrachloride — tetrachlorothane

(8) Lung

(a) Acid gases — chlorine, bromine, oxides of nitrogen, phosgene, sulfur dioxide

(b) Halogenated hydrocarbons — especially unstable compounds

(c) Ammonia

(9) Skin

(10) Skeleton — phosphorus, fluorine

3. Classification according to mode of absorption

(1) Respiratory absorption

Gases, volatile liquids, dusts, fumes and spray

(dusts and spray droplets also collect in upper respiratory passages and are swallowed)

(2) Skin absorption

Organic liquids mostly oils of low volatility —

Phenol and other alcohols

Halogenated hydrocarbons

Organo metallic compounds

Certain gases — HCN

Certain aqueous solutions —

Sodium pentachlorphenate

*Modern Investigative Procedure.*—The technical procedures of industrial toxicology are neither mysterious nor strange. The study of living animal organisms involves the difficulties associated with biological variability but the technique has come to be more or less standardized and is founded on common physical, chemical, and physiological principles. As bio-

physical and biochemical information accumulates, and as animal metabolism comes to be better understood, the problems are approached more and more by common technical means.

The nature and the scope of investigative studies in the field of industrial toxicology are determined by certain practical considerations. The investigator in this field is likely to be led into physiological avenues that may take him far afield, but he must recognize the practical limitations that are imposed upon financial expenditures by the economic potentialities of a given material that is submitted for investigation. As will be appreciated later, the cost of toxicological investigation of new chemicals may be regarded as part of the cost of development and production. Therefore, it must be carried out at reasonable cost, in search of the practical information that is required to safeguard the men who will be engaged in production, and to prevent injury to the distributor and consumer of the products. It may happen that the accomplishment of these ends will require the most elaborate and comprehensive investigation. In the commercial sense, however, this can be justified only if the product in question has a potentially large field for commercial exploitation. In any sound economic sense, such extensive work could only be justified by the existence of a wide field of real usefulness for the product. More frequently, perhaps, there will be a simple toxicological question to be answered. For example, which of several related chemicals is the least injurious to make or handle under a given set of conditions? Which is the best of several new solvents for a given purpose, from the toxicological viewpoint? Which of several materials can safely be employed in a fabric or wrapper or container that is to have contact with one's skin, or one's food? The answer to these questions can often be obtained simply and inexpensively.

There is another aspect of the economic problem that must not be ignored, however. Work of the type suggested by the several questions above, will solve only the immediate problem, and if it is carried out in the simplest and most pragmatic manner that can be thought of, it builds up very little sound information as a basis for the interpretation of subsequent related problems. Moreover, if everyone who is interested in such matters sets about to answer his own questions of the type in such a manner, the work is unduly costly in the broad economic sense, because it is repeated over and over, as often as such questions arise. Moreover, this is what the experimental worker thinks of as "hack work."

Some of it is justified and must be done, but it is uninteresting and, in the main, unprofitable investigative work. In the long run it is better to proceed with such work on a sound general scientific basis, to seek broadly useful information and, perhaps slowly and by gradual steps, to build up a fabric of general knowledge.

*General Principles and Methods.* — The toxicological problems that arise in connection with industrial production must be examined with a two-fold purpose. It may be that the hazards of handling a potentially dangerous material are limited to the manufacturing plant. On the other hand the same type of hazard or a related one may extend to the final consumer or user of the product; that is, there may also be hazards to the health of the general public. It is necessary to take the latter possibility into account for the very practical reason that the control of public health hazards is often a difficult and complicated matter. It is almost axiomatic that any material, no matter how potentially dangerous it is, can be safely handled in a properly equipped and organized industrial establishment. It is almost equally well established, however, that the safety of the public depends upon the elimination of opportunities for risk, — in short, upon essentially fool-proof conditions. Therefore, industrial toxicological investigations must be planned on the basis of the ultimate character, distribution, and use of industrial products. If a material is too dangerous for general distribution, there is little point in carrying out elaborate investigation for the purpose of safe guarding its manufacture, unless the circumstances are such that the final product into which the dangerous material enters is devoid of correspondingly dangereus characteristics.

In general, new chemicals should be studied from the toxicological viewpoint while they are in process of development in the research laboratory. They can be handled with reasonable safety so long as small quantities are handled by trained technical personnel. The danger of handling them increases progressively as production passes from the research laboratory to the pilot plant and on into the commercial scale. It is inadvisable from every point of view to

carry out the toxicological experiments on the personnel of the pilot and production plants, and therefore, adequate animal experimentation should follow at once when a new product is developed that appears to have utilitarian and commerical possibilities. If work of this type is done properly and systematically, it will provide a basis for anticipating the toxicological characteristics of many new materials and for simplifying subsequent investigations, thereby saving untold difficulties as well as unnecessary expense.

In the case of any material suspected of having toxic properties, several physiological questions must be asked and answered.

1. How is it absorbed into the human body? There are three normal avenues of entrance into the animal organism, — viz. (1) by introduction into the mouth and being swallowed i.e. gastro-enteric absorption, (2) by penetration through the skin, i. e. cutaneous absorption, and (3) by inhalation with the inspired air, i. e. absorption through the lung.

Materials that have to be handled by industrial workmen may be swallowed as the result of putting contaminated fingers, tobacco, tools, food and beverages into the mouth and also by swallowing particulate matter that has been deposited in the nose, mouth, and throat out of the stream of inspired air. A considerable proportion of the dust that is inhaled finds its way into the gasto-enteric tract by this means.

Many materials are capable of absorption through the skin. Most of these materials are fat-soluble oily substances of comparatively low volatility, but there are others that do not fit into this group of compounds. It must be remembered that many liquids, solids, and gases can penetrate the unbroken skin, and therefore, any new material must be tested in this regard before one can be certain of its potentialities with respect to cutaneous absorption.

The inhalation of gases, vapors, fumes, or droplets of spray suspended in air provides the most effective means for the absorption of noxious materials into the body. This comes about (1) because of the large volume of air that is breathed in, (amounting to from eight to ten cubic meters in the course of an eight-hour working day, (2) because of the ease with which most substances penetrate the microscopically thin pulmonary membrane, (3) because of the very large surface of the pulmonary membrane, (4) because of the great volume of the blood that circulates in the lung tissue, and (5) because of the difficulty of avoiding such exposure. The last factor is of peculiar importance; it is comparatively easy to avoid contact of the skin with dangerous materials, especially if they are irritating to the skin and thereby give warning of their harmful properties; it is even easier to avoid taking poisonous substances into the mouth through the exercise of normal care; it is not so easy to avoid breathing contaminated air, while the use of masks and similar protective devices is a source of such inconvenience and discomfort that many workmen will prefer to take chances by avoiding their use. Care and skill are required in designing operating and ventilating eqiupment so as to avoid a significant degree of contamination of the air with dangerous substances. If protection cannot be provided by this means, respirators of some type are required, and under suitable circumstances and under proper conditions with respect to choice of equipment and supervision in its use, adequate protection can be given. Progress in the development and manufacture of such equipment has been very rapid, and it is now possible to obtain suitable masks and respirators for almost any set of conditions.

The function of the industrial toxicologist with respect to various substances to which industrial workers may be exposed, is to determine the means by which they may be absorbed, and to establish the degree of absorption through different channels that is compatible with maintenance of normal health and well being. This latter phase of the subject raises the second question —

2. How poisonous is the material in question and what is its mode of action. That is, what type of injury does it produce when absorbed? The answer to these questions, and also to the problem of the mode of absorption (question No. 1), is usually obtained by animal experimentation. Rather than to wait and see the effects upon industrial workers, animals are exposed to the materials in question, under carefully controlled conditions, their reactions are studied, and the results are compared with those obtained on other and better known materials.

There are two general methods of procedure. The one consists in the determination of the lethal dose by various methods of administration, and the results are usually expressed in terms of

quantity of compound per unit of body weight of animal, or (for volatile or particulate materials) quantity of compound per unit volume of air. The other method, more important for practical purposes, consists in the determination of the maximum dosage that can be tolerated without injury or illness when administered intermittently and regularly over a prolonged period of time. (It will be apparent to any one familiar with industrial operations, that the latter conditions of exposure correspond more closely with those that exist in industrial environments.)

One is not justified in estimating the lethal dose of a compound for other animals or for man from results obtained on one species of animal, by calculations based on weight. Therefore, the frequently employed method of expressing toxicity in terms of milligrams per kilogram of body weight may be somewhat misleading to the novice. That, however, is not the purpose of this or any other conventional mode of expression. The real purpose is to provide a basis for the comparison of different compounds tested in the same manner on animals of the same species, allowing only for certain individual differences in the animals. Such comparative data on the toxicity of various compounds for different modes of exposure will reveal the type and the relative severity of the potential hazard that is associated with human exposure to these compounds. The fallacy of transposing toxicity data from one species of animal to another can be illustrated simply, by pointing out that the noxious effect of the absorption of carbon monoxide varies greatly from one species of animal to another because of differences in the combining power of the hemoglobin of the blood of different species for carbon monoxide. Another illustration of this fallacy is seen in the fact that certain toxic substances may exert their effect not upon the entire body of an animal but upon a specific structure such as a specific gland or a specific brain center. The toxic concentration, therefore, depends but little in such instances upon the relative weight of the animal as a whole but upon the relative mass of the susceptible tissue.

The determination of the maximum tolerable repeated dose of a given substance is likely to be a long and tedious job, by the very nature of the search for the minimum effects of prolonged exposure. It is here, however, that the interesting work lies, since such studies usually involve examination into the mechanism of the behavior of the material, its fate within the animal organism, and its means and rate of elimination. Safe levels of exposure to potentially poisonous substances often depend upon the existence of a satisfactory balance between the rate of absorption of the material on the one hand and the rate of its destruction, distribution and elimination on the other. The study of these mechanisms involves careful selection and use of chemical and physical techniques that are not unfamiliar in principle to the investigator in other fields. The results of such investigation, when successful, provide the basis for the medical and engineering control of industrial hazards, in that they set up criteria for the detection of the earliest effects of exposure upon human beings, while at the same time providing tentative limits for safe human exposure, expressed in terms either of environmental conditions, or of some physiological response. (Safe exposure in terms of environmental conditions, may be illustrated by the accompanying table in which certain generally accepted or officially adopted limits for the safe concentration of a series of poisonous compounds and elements are listed.) From the information obtained in studies of this type the specifications for safe working conditions are provided, and suitable control then becomes largely an engineering problem. The plant physician then sets up a system of medical inspection which is designed primarily for the purpose of discovering the faults in the specifications or evidences of failure to comply with them.

*Toxicologic Information.* — It is obvious that this type of investigation is building up a body of information, the recording and dissemination of which will be profoundly useful to industry and the community as a whole. One goal, achieved only to a limited degree, is to provide such an understanding of the nature of toxic mechanisms as to relate the toxic properties of substances to their molecular and chemical structure. Another goal is to provide accurate and widely disseminated information concerning dangerous materials, to the end that the public may be safeguarded against exploitation by ignorant, careless, and irresponsible manufacturers and distributors of dangerous products. It must be emphasized in relation to these matters

that it is a responsibility of industrial physicians as well as manufacturing chemists to know the scientific literature of this field and to acquaint themselves with the sources of new information. To an increasing degree, this knowledge will be expected of them as a logical moral, professional, and legal responsibility to the community.

Safe Limits for Some Toxic Substances Encountered in Industry

| Metal, Dust, Fumes | | |
|---|---|---|
| Mercury | 0.1 | mg/cu meter |
| Cadmium | 0.1 | mg/cu meter |
| Lead | 0.15 | mg/cu meter |
| Zinc | 15.0 | mg/cu meter |
| Manganese | 30.0 | mg/cu meter |
| | | p.p.m. |
| Organic Vapors | | |
| Aniline | 5 | |
| Nitrobenzene | 5 | |
| Tetrachlorethane | 10 | |
| Carbon disulfide | 15 | |
| Dichlorethylether | 15 | |
| Formaldehyde | 20? | |
| Benzol | 75 | |
| Monochlorbenzene | 75 | |
| Dichlorbenzene | 75 | |
| Carbon Tetrachloride | 100 | |
| Ethylene dichloride | 100 | |
| Methanol | 200 | |
| Toluene | 200 | |
| Xylene | 200 | |
| Trichlorethylene | 200 | |
| Tetrachlorethylene | 200 | |
| Turpentine | 200 | |
| Amyl acetate | 400 | |
| Butyl acetate | 400 | |
| Ethyl ether | 400 | |
| Styrene | 400 | |
| Naphtha (gasoline) | 1000 | |
| Gases | | p.p.m. |
| Arsine | 1 | |
| Ozone | 1 | |
| Phosgene | 1 | |
| Chlorine | 1 | |
| Phosphine | 2 | |
| Hydrogen fluoride | 3-6 | |
| Hydrogen Chloride | 10 | |
| Oxides of Nitrogen | 10 | |
| Sulfur dioxide | 10 | |
| Hydrogen sulfide | 20 | |
| Hydrogen cyanide | 20 | |
| Carbon Monoxide | 100 | |
| Ammonia | 100 | |

## SEA BATHING AIDS CONVALESCENCE TWO PHYSICIANS POINT OUT

Now is the time when the seashore begins to beckon. In *The Journal of the American Medical Association* for April 15 Charles I. Singer, M.D., Long Beach, N. Y., and Kenneth Phillips, M.D., Miami, Fla., cooperate to explain the health values of sea bathing. Their report is part of a study of health resorts made by the Committee on American Health Resorts of the American Medical Association. Sea water is a compound salt solution containing a great variety of metallic substances but absorption of these mineral substances into the body does not occur even with prolonged bathing. Therefore the chief values of sea bathing are attributed to the temperature of the water, the difference between the temperature of the skin and that of the water, the slightly irritant effect of the salt content on the skin, the mechanical stimulation by the waves of the surf, the effects on the body of exposure to air and sun after bathing and, finally, the effects of the sea breeze. Minor amounts of iodine in the air and the drinking water near the seashore also may have beneficial effects.

Among conditions which seem to be beneficially influenced by a stay at the seashore in summer are those in which the human being has been exhausted by the strain of modern life so that he is nervously exhausted. A seashore rest is also beneficial for convalescense after any disease that had helped to break down resistance.

People with tuberculosis or excessive action of the thyroid gland or heart conditions may be injured by attempts to utilize the value of the seashore in a northern climate. Particularly important, however, in the values of the seashore for health is emphasis on the duration of the stay; to get good effects anywhere from six to eight weeks may be required.

# News of the State

## PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

### DEATHS

James Marshall Bell, Rochester; retired; University of Michigan Medical School, 1879. President of the Rochester State Bank in 1912. Died March 23, 1944 at the age of 87.

Frank J. Berger, Chicago; National Medical University, 1901. Physician and surgeon in Chicago over 40 years. Died in American Hospital March 31, 1944 at the age of 86.

Andrew Christensen, Chicago; Jenner Medical College, 1901. Began practicing medicine in Chicago in 1901 and was active until his illness a few weeks ago. Died in Swedish Covenant Hospital, April 5, 1944 at the age of 82.

Milo A. Crane, Elmhurst; Wayne University College of Medicine, Detriot, Michigan, 1907. Was injured in an automobile accident and died a few days later in a hospital in Kentucky on April 7, 1944 at the age of 70.

Leon Feingold, Chicago; University of Illinois College of Physicians and Surgeons, 1899. Was member of American College of Surgeons. Died April 14, 1944 at the age of 68.

Casper H. Foote, Franklin Grove; St. Louis University School of Medicine, 1905. Had recently moved from Annawan, Illinois. Was instantly killed on March 14th when he was struck by a Northwestern Railway train. He was 71 years old.

Russell C. Johnson, Riverside; Rush Medical College, 1917. Died in MacNeal Memorial Hospital, Berwyn, an institution he helped to found, April 10, 1944 at the age of 55.

Jacob Carl Krafft, Oak Park; Long Island College Hospital, New York, 1899; postgraduate work in Munich and Vienna. During World War 1, he served as a major in the Medical Corps of the A.E.F. and was with the 90th division in France. At the time of his death he was clinical professor of pediatrics at Loyola University School of Medicine; attending pediatrician at Norwegian-American, Garfield Park and Walther Memorial Hospitals. Past president of the Illinois State Medical Society. Died March 28, 1944 at the age of 69.

Patrick Francis O'Farrell, Mount Olive; Loyola University School of Medicine, 1916. Was a captain in the Medical Corps in World War I and was attached to the old 122nd Machine Gun Battalion of the 33rd Division. In World War II until released on account of ill health. Died following a stroke on March 21, 1944 at the age of 58 years.

John W. O'Neill, Chicago; Rush Medical College, 1892. Practiced medicine in Chicago for 50 years; member of the staff of Henrotin Hospital. Died April 4, 1944 at the age of 86.

Harris Adair Patterson, Joliet; Rush Medical College, 1897. Had served two terms as president of the Will Grundy County Medical Society. Died March 13, 1944 at the age of 80.

Hans Arthur Paulsen, Chicago College of Medicine and Surgery, 1912. Died of a heart ailment April 11, 1944 at the age of 57.

Alexander F. Stevenson, Chicago; Rush Medical College, 1898. Had practiced medicine on Chicago's north side for 44 years. Died April 2, 1944 at the age of 71.

Frank J. Weber, Sr., Olney; Washington University School of Medicine, 1904. He was the first of the Weber Brothers to join the late Dr. George Weber, founder of the Olney Sanitarium. Died March 25, 1944 at the age of 65.

# P. R. N.

The Jocular Jingles of C. G. F.

*by*

*Charles G. Farnum M. D.*

*Peoria, Ill.*

## THE PROBATIONER PROTESTS.

We left our homes and came on here,
We wanted to be nurses,
Admitting that things were not so clear
On what was hospital atmosphere;
Now we'd like to reverse our gear,
With other sad reverses.

They make us struggle with our books,
We study them forever,
We're everything from maids to cooks,
They will not grade us on our looks,
In which we are right clever.

We sweep the floor and make the bed,
We wanted to be nurses,
We rub a back and comb at a head
And many a salty tear we shed;
We fear that we have been misled
And hope it reimburses.

We wear an awful uniform,
We'll wear the thing forever,
It was designed so 'twould deform
Our very spiffy sylph-like form,
A shape that's really clever.

We came and we were all sincere,
We wanted to be nurses,
But our lives have proved to be right drear,
With the things we see and the things we hear
Our days are filled with work and fear.
A long hard road traverses.

When we our lives of ease forsook,
We've left it now forever,
And all this drudgery undertook,
Now as we view the bleak outlook
I fear we were not clever.

We are not getting anywhere,
We wanted to be nurses,
Some day in a fit of dark despair
We'll start on a trip from here to there
And we will give this place the air
Amid a shower of curses.

We came for nothing else but fun,
And that's been our endeavour,
But here we work from sun to sun,
One's like a nun and we've begun
To think we were not clever.

## ACHIEVEMENT

**I am perched on the highest peak**
**That a pupil nurse can reach.**
**I may have been a lemon,**
**But now I am a peach.**

**This very lofty pinnacle**
**Was attained by me today:**
**Now I'm a qualified nurse,**
**No matter what they say.**

**Today I finished the hardest test,**
**I am writing it home to mother,**
**With one hand I emptied a bed pan**
**While I ate some cake with the other.**

## RELATIVITY

The learned scientists discuss
This thing called relativity,
And each one makes an awful fuss
About just what the thing can be.

And every one is surely right,
Yet never two think just the same;
They argue though, throughout the night
And rave and fight in science name.

This problem they call relativity
Is easy of solution as can be —
You like 'em best the wider berth you give 'em,
And never try to live in houses with 'em.

## FUTILITY

**What of energy, time and of money**
**One sees spent by the men every day,**
**In a futile attempt**
**To preserve them exempt**
**From appearance of age and decay.**

**What a silly assortment of efforts**
**They resort to belieing their age,**
**In their manner and clothes,**
**In their speech and their pose,**
**Entertainment and sports they engage.**
**But the calendar cannot be cheated,**
**Their ridiculous efforts are vain,**
**The advice of the sage**
**That a man be his age**
**Will protect from disgust and disdain.**

**And the saddest of all of these efforts**
**In his striving toward youth and its flare,**
**To look young is the goal**
**He deceives not a soul,**
**Is the man who keeps dyeing his hair.**

# *What Are*
# *THE MOST POTENT*
## *Androgenic Substances*



**Pure synthetic testosterone propionate**
**PERANDREN***
**most effective androgen for parenteral injection**

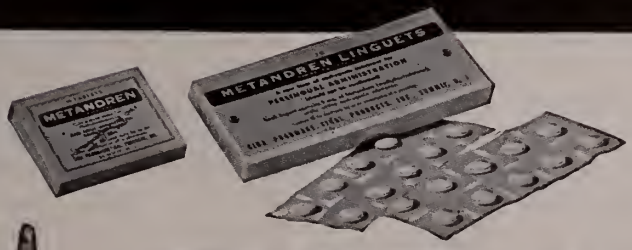


**Orally active form of methyltestosterone**
**METANDREN* TABLETS**
**most potent androgen for ingestion therapy.**



**Methyltestosterone in linguets for slow absorption**
**METANDREN LINGUETS***
**most potent androgen for sublingual use.**






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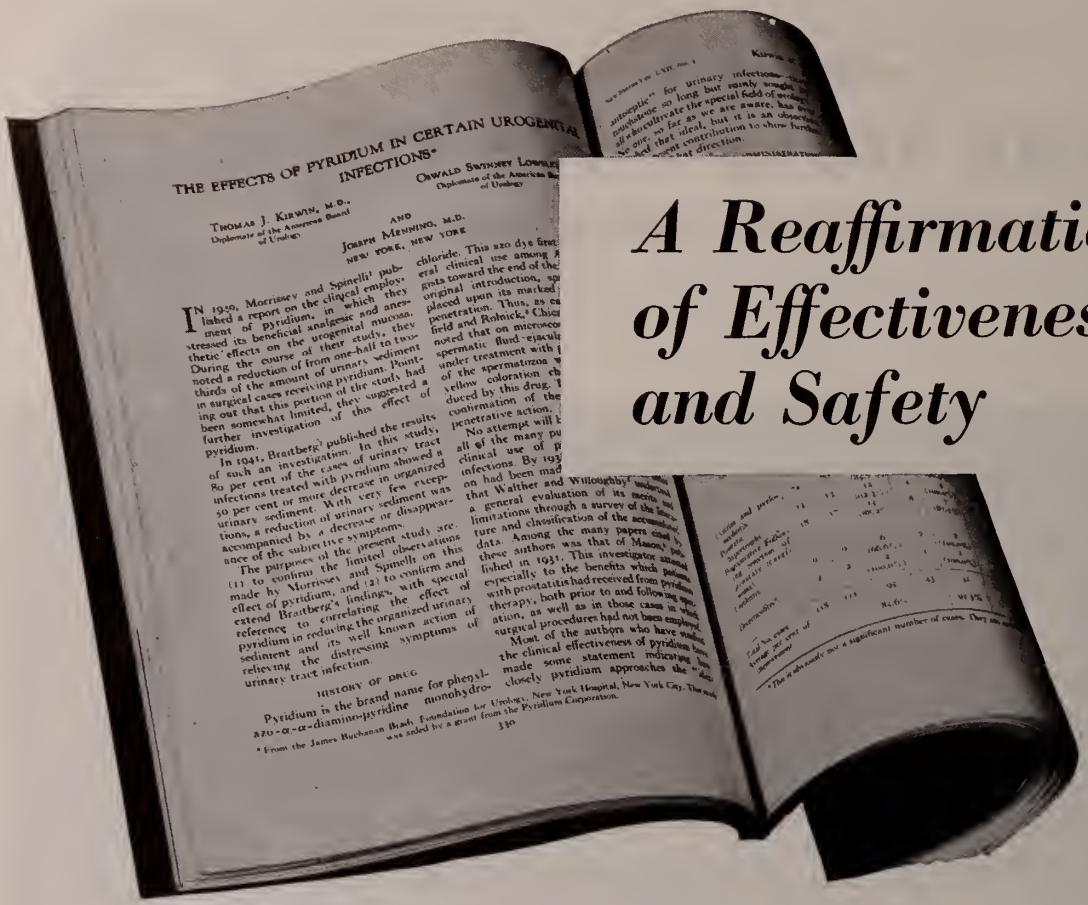
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TOMORROW'S MEDICINES FROM TODAY'S RESEARCH




# *A Reaffirmation of Effectiveness and Safety*

THE recent careful study conducted by Kirwin, Lowsley, and Menning, of the James Buchanan Brady Foundation for Urology, New York Hospital, and published in the December 1943 issue of *The American Journal of Surgery*, reaffirms the many previously published reports emphasizing the clinical effectiveness and complete safety of Pyridium in the symptomatic treatment of common urogenital infections.

In this study of 118 cases of common urogenital infections, routine Pyridium therapy administered for a period of two weeks produced relief of the distressing symptoms in the following percentage of cases: Pain on urination was alleviated or abolished in 95.3 per cent of the cases; burning on urination was relieved in 93.6 per cent of the cases; frequency was greatly reduced or abolished in 85 per cent of the cases; and nocturia was reduced or eliminated in 83.7 per cent of the cases.

The prompt and effective symptomatic relief provided by Pyridium is extremely gratifying to the patient suffering with distressing urinary symptoms. Gratifying also is the confidence in the physician and his therapy which is so evident among patients who are treated with Pyridium.




More than a decade of service in urogenital infections

**PYRIDIUM**

(Phenylazo-alpha-alpha-diamino-pyridine mono-hydrochloride)

Pyridium is the United States Registered Trade-Mark of the Product Manufactured by the Pyridium Corporation

MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N. J.

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## To state it another way:

| ONE | ONE | ONE |
|---|---|---|
| level tablespoonful of Pablum (or Pabena) when mixed with . . . | tablespoonful of milk, formula or water (hot or cold) makes . . . | rounded tablespoonful of cereal feeding of average consistency. |

**To make thicker feeding (as in pylorospasm, pyloric stenosis, etc.), increase the amount of Pablum or Pabena. To make thinner feeding, as in 3-months infants, increase amount of milk, formula or water.**

NO COOKING . . . MIX UP ONLY AMOUNT TO BE FED . . . NO LEFTOVER CEREAL TO GO BACK INTO REFRIGERATOR . . . PABLUM IS ECONOMICAL . . . NO WASTE . . . QUICK AND EASY TO PREPARE . . . SINCE 1932.

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# *Liquid Bulk*



WHEN commanded to clean the stables of Augeas, where 3000 oxen had been kept for many years, Hercules solved this stupendous problem in one day by diverting the rivers Alphaeus and Peneus to run through the waste-laden stables.

Similarly, in the intestinal tract, there is no more efficient method of flushing away waste than by the use of *liquid bulk* —as formed by Sal Hepatica plus water.

Clinical and laboratory tests prove that:

★ in the isolated loop of a dog's ileum, a laxative solution of Sal Hepatica increased the liquid bulk by 34 per cent in one hour.

★ in thistle tube experiments, a Sal Hepatica solution increased the liquid bulk by 100 per cent within 6 to 12 hours.

★ Sal Hepatica's liquid bulk helps stimulate bowel muscles, maintain a proper water balance. And the salines of Sal Hepatica relieve gastric acidity, promote the flow of bile.

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*Tablets—*

5 grains each, in tubes of 10, and bottles of 50, 250 and 1,000.

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in bottles containing one ounce.

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# Book Reviews

Essentials of Dermatology. 2nd Edition, 1944. By Norman Tobias, M.D., Pp. 497 with 143 illustrations. Philadelphia: J. B. Lippincott Company.

As the title suggests, this book deals only with the essentials of dermatology, but the subject matter has been well organized and is presented in a clear and concise manner in paragraph style. It is more than a compendium and briefer than the usual dermatology text. For example, there are five pages devoted to the treatment of psoriasis and emphasis is placed on the use of crude coal-tar ultraviolet therapy as described by Goeckerman.

The author has attempted to stress the differential diagnoses of the common skin diseases. Although the size of the book prevents an exhaustive discussion of therapy, the most recent concepts and therapeutic measures are given. The illustrations are in black and white, and are well chosen. The chapter of Dermatologic Therapuetics is an excellent summary of therapeutic principles and contains an excellent description of physical methods of treatment and their indications. The section on intensive therapy of early syphilis is however, rather brief. An unusual finding is the mention of most of the uncommon and rare dermatoses. On the back of the front cover and on the first flyleaf is an excellent outline of the use of the sulfonamide drugs in dermatology, while a table of blood chemistry normal values is found on the last flyleaf and the inside of the back cover. The index is complete and comprehensive.

The author has achieved in an admirable manner his primary purpose "of placing a handy volume at the disposal of general practitioners and medical students who often have neither time nor inclination to refer to the larger standard dermatologic textbooks."

---

Applied Dietetics: The Planning and Teaching of Normal and Therapeutic Diets; By Frances Stern, Chief of Frances Stern Food Clinic, The Boston Dispensary; Assistant in Medicine, Tufts College Medical School: Special Instructor in Dietetics in Social Service, Simmons College, The School of Social Work; Associate in Nutrition, Simmons College School of Home Economics. Second Edition. The Williams & Wilkins Company, Baltimore 1943. Price $4.00.

The first edition of this book proved highly popular when it was published in 1937, and the increased knowledge concerning food, minerals, vitamins in health and disease, led to the preparation of this second volume.

This is a highly practical manual of the subject and should be of great value to the physician, dietician and others interested in the preparation of proper diets for patients with various types of ailments. It should be of especial interest to the busy physician who wants a quick reference at hand to give the desired information at a glance.

The book is full of tables to aid materially in simplifying the diet and to give a wide variety of foods used in the preparation of a normal balanced diet.

The book is scientific and should be of much value to anyone desiring this type of information.

(*Continued on page 42*)

# Marshal of Mercy



In war, even more than in peace . . . dispenser of blessed relief . . . his the precious power over pain.

Long hours the medical officer toils . . . routinely yet heroically . . . without thought of citation . . . grateful for brief moments of relaxation . . . for the cheer of an occasional smoke. And likely as not, his cigarette is Camel, the favorite brand in the armed forces* . . . first choice for smooth mildness and for pleasing flavor. It's what every fighting man deserves . . . that extra measure of Camel's smoking pleasure.



## 1st in the Service

*With men in the Army, Navy, Marine Corps, and Coast Guard, the favorite cigarette is Camel. (Based on actual sales records.)




Camel COSTLIER TOBACCOS

New reprint available on cigarette research—Archives of Otolaryngology, March, 1943, pp. 404-410. Camel Cigarettes, Medical Relations Division ,One Pershing Square, New York 17, N. Y.

BOOK REVIEWS (Continued)

BABY DOCTOR; By Isaac A. Abt, M.D., Whittlesey House, McGraw-Hill Book Company, Inc., New York and London. Price $2.50.

Doctor Abt, who has completed more than fifty years of service as a "baby doctor," is well fitted to write a book which carries an unusual appeal to the reader. This is not a text in any sense of the word, but a highly interesting story of the development of a specialty in medicine. When Doctor Abt was born in a small town near Chicago there was not a single pediatrician in the state of Illinois, and there were exactly two in the United States — both located in New York City.

By reading this book you will get, step by step, the development of pediatrics leading up to the modern care of the baby as given today. Many interesting anecdotes taken from a vast fund of experience over a period of years makes the book more enjoyable, and the reader is loathe to lay it down until it is finished.

Those who know this famous writer realize that he is extremely modest and his book tells a plain story with but little reference to the accomplishments of the writer himself. His determination to be a baby specialist at a time when there were but few in that field, the lack of encouragement given him by many associates who believe that the care of infants and children was not markedly different from the care of adults, his post graduate work, teaching, and vast clinical experience, are all related in the autobiography.

We recommend this book to any physician who will take the time to read a story which will be of interest to all. Even though only a few have had the wealth of clinical experience from which to draw, this story will recall many experiences to the reader in his own practice. Doctor Abt is to be congratulated for adding the story of fifty years as a "baby doctor" to the many authoritative manuscripts which he has written over a period of many years. It is well worth the time of any physician or any layman interested in the subject of human relations, to read it.

# Books Received

**The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.**

OFFICE ENDOCRINOLOGY; Second Edition. By Robert B. Greenblatt, B.A., M.D., C.M., Professor of Experimental Medicine, University of Georgia School of Medicine; Director, Sex Endocrine Clinic, University Hospital, Augusta, Georgia. With a Foreword by G. Lombard Kelly, M.D., Dean, University of Georgia School of Medicine. Charles C. Thomas, 1944. Springfield, Illinois. Price $4.00.

FEMALE ENDOCRINOLOGY, Including Sections on the Male. By Jacob Hoffman, A.B., M.D., Demonstrator in Gynecology, Jefferson Medical College; Pathologist in Gynecology, Jefferson Hospital; Formerly Research Fellow in Endocrinology and Director of the Endocrine Clinic, Gynecological Department, Jefferson Hospital, Philadelphia. 788 pages with 180 illustrations, including some in colors. W. B. Saunders Company, 1944. Philadelphia and London. Price $10.00.

THE ART AND SCIENCE OF NUTRITION. A Textbook on the Theory and Application of Nutrition. By Estelle E. Hawley, Ph.D., and Grace Carden, B.S., The University of Rochester, School of Medicine and Dentistry; Strong Memorial and Rochester Municipal Hospitals, Rochester, New York. With 139 Illustrations including 11 in Color. The C. V. Mosby Company, St. Louis, 1944. Price $3.75.

STOP WORRYING AND GET WELL; By Edward Podolsky, M.D., Bernard Ackerman, Inc., New York. Price $2.00.

---

The central part played by infection has been demonstrated again and again. In the Victorian age, for example, tuberculosis of the lung was relatively common among the well-to-do. This is not surprising when one remembers that the method of medical care was to shut up the unfortunate sufferer in a room with closed windows and a roaring fire and then bring in friends and relatives to watch a beautiful deathbed scene. Those who still remember "Uncle Tom's Cabin" and "Litle Women" are not likely to forget good clinical demonstrations given unconsciously in these books. The introduction of fresh-air treatment for this disease had had sometimes been regarded as the essential cause of improvement but it is clear that the reduction of the risks if infection played a larger part.—James Mackintosh, M.D. N.J. Pub. Health News Dec. 1943.

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## AID SOUGHT FOR SANATORIUMS FOR HEART DISEASE CRIPPLES.

### Rheumatic Fever Increase Prompts Doctors To Study New Extension Of This Disease Of The Heart.

One of the greatest needs of America today is adequate institutional space for the children with rheumatic fever who need the kind of medical attention and nursing care that are made available in institutions like Irvington-on-the-Hudson in New York and the La Rabida Sanatorium in Chicago, according to Morris Fishbein, M.D., editor of *Hygeia, The Health Magazine* in an editorial in the May issue. Dr. Fishbein says:

"Conservatively estimated perhaps 500,000 children and perhaps an additional 500,000 adults in the United States at any given time have crippled hearts that represent a previous infection with rheumatic fever. The collections of great numbers of young adults in camps as a part of the war effort has been associated with an increased incidence of rheumatic fever. A national survey is now under way to determine the actual incidence of this disease.

"Unfortunately the actual cause of this condition is unknown. There seems to be, however, close association with infection with the germ known as the streptococcus, for rheumatic fever frequently follows repeated sore throats, scarlet fever and other conditions in which the streptococcus is the invader. Study of many thousands of cases also seems to indicate that inadequate clothing, housing, food and sunshine are important factors since they tend to lower resistance to infections of all kinds.

"Most cases of rheumatic fever begin in childhood between the fifth and fifteenth year. Often the preliminary symptoms have been called growing pains. A child will awaken complaining of a pain in an ankle or another joint. It will appear flushed and have some fever. Shortly the painful joint may be better but a little later other joints may be involved. For a while the child may seem to be well. However, careful study will show that the infection is still active. If tests are made, carefully recording the temperature of the body, and if the blood sedimentation rate is determined, the evidence will make clear that

(*Continued on page* 46)




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*GOTTLIEB, R. Whole Liver as an Adjuvant to Iron in the Treatment of Hypochromic Anemia, Canadian M.A.J. 47: 456-460 (Nov.) 1942.

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HEART DISEASE (Continued)

the child is still the subject of rheumatic fever. Most serious, however, in all cases of rheumatic fever is the damage to the heart. It is this damage of the heart that makes it among the most serious crippling disease of childhood. Infantile paralysis is feared because it is a visibly crippling disease. Rheumatic fever cripples tens of thousands in contrast to the thousands damaged by infantile paralysis.

"Rheumatic fever attacks insidiously. Its first ravages are frequently unnoticed. Then progressively, and often irreparably, it damages the heart. There can be no substitution with an artificial heart as is possible when there is a crippled limb. There can be no orthopedic surgery to reconstruct the damaged tissues. Most of those affected by rheumatic fever die before they are 30 years old. For the rest, there is today just the hope that can be offered by good medical care under the best possible conditions.

"Our greatest hope in rheumatic fever rests in early recognition of the disease and provision for prolonged care. Rheumatic children should sleep in the sunniest and driest rooms that are available. They should be guarded against undue exposure to the weather, particularly in the fall and winter months. They should get plenty of rest, being put to bed early each night. They should also have a nap during the day if they seem at all tried or if there is any aching of the limbs. Indeed the child with rheumatic fever should be guarded against excess physical activity at all times both in school and at home. Dr. Paul Dudley White has said that the family may do much to aid the child in overcoming this condition. "The home in which a sick child, or for that matter a healthy child, lives must strive unselfishly for the welfare of that child . . . . With physical care, proper discipline, a cheerful religion of some sort and good example the child with heart disease can grow up to be a happy, useful member of the community.'

"In all of the United States there are just a few institutions devoted to the care of children with rheumatic fever. The average stay of a child in such an institution is nearer to six months than the ordinary few weeks that one would expect to be given to a child who is ill. One of the greatest needs of America today is adequate in-

(*Continued on page* 50)



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HEART DISEASE (Continued)

stitutional space for the children with rheumatic fever who need the kind of medical attention and nursing care that are made available in institutions like Irvington-on-the-Hudson in New York and the La Rabida Sanatorium in Chicago. Actually neither of these institutions has ever been given the adequate support that is merited by the quality and character of the service rendered."

---

## INADEQUATE DIETS AND NUTRITIONAL DEFICIENCIES IN UNITED STATES

The Committee on Diagnosis and Pathology of the Food and Nutrition Board of the National Research Council has reviewed material reported in widely scattered journals on the state of nutrition of the people of the United States. An appreciable percentage of diets fail to meet more than 50 per cent of the recommended daily allowances of the Food and Nutrition Board, but many more diets are deficient by less than 50 per cent, emphasizes *The Journal of the American Medical Association* for April 15. This widespread prevalence of more or less deficient diets is associated with a high incidence of deficiency states, largely mild in intensity and gradual in its course. The problem thus created is both preventive and corrective. For prevention, production of sufficient food must be maintained and better distribution is required; judicious enrichment of appropriate foods may be advisable, and dietary education should be intensified and extended. For correction there is need for skill in detecting deficiency conditions and improved procedure for the treatment of such conditions. There has been some exaggeration of the benefits of optimal nutrition and much exploitation of the vitamins. This has retarded the proper application of the science of nutrition. However, knowledge of the relation of nutrition to health is being rapidly uncovered. The evidence now available, incomplete though it may be, leads to but one conclusion: that "there is a real difference as measured in terms of growth development and general health record between optimum and just adequate nutrition; and that every practical effort should be made to apply this knowledge in the interest of human welfare."

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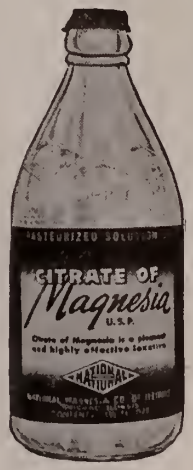
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## ADVISES HOARSENESS IS EARLY SYMPTOM OF CANCER OF LARYNX

Pointing out that hoarseness is an early symptom in 95 per cent of the cases of cancer of the larynx and that a high percentage of such cancers can be treated effectively in the early stages, Max Cutler, M.D., Chicago, advises in *The Journal of the American Medical Association* for April 1 that the public should be taught to insist on an examination of the larynx, "perferably by a laryngologist, if hoarseness persist for longer than two weeks. Theoretically, a combination of early diagnosis and prompt and appropriate treatment should render cancer of the larynx largely a disease of historical interest."

Dr. Cutler's report is based on 413 cases of cancer of the larynx observed by him between January 1931 and January 1943. Of the patients 83.5 per cent had hoarseness. He places particular emphasis in the results obtained by him from use of concentration radio-therapy. This technic, first described by him in 1941, is based on the use of large daily doses of x-rays over a comparatively short period of time (nine to twelve days) and a total dose sufficient to produce a reaction of the skin and the tissues immediately beneath it. As the daily dose is increased the size of the port or opening in the x-ray machine is diminished. This provides a larger dose to the central portion of the cancer, believed to be more resistant to x-rays.

Out of the 413 patients, there were 170 who received adequate radiation as the only form of treatment. Of these, Dr. Cutler says, the disease was comparatively early in only 50 cases." "When one considers the entire series of 413 cases," he says, "the incidence of early lesions is approximately 20 per cent. Thus a reasonable chance of cure at the very outset existed in only 20 per cent of the cases. This is a challenge to the medical profession and to the public in the matter of early diagnosis and a special opportunity for leaders in cancer control. Since these lesions produce early symptoms and since most of them (lesions of the true cord) grow slowly and almost never metastasize (spread to other parts

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of the body) in their early stages, the opportunity for a planned campaign of education in this field of cancer control is indeed unique. . . ."

Of the 50 early cases, 40 patients were free of the cancer from one to five years after radiation treatment. Twenty-three of them, or 82 per cent, Dr. Cutler reports, are well and have been free of disease more than three years. Their voices are practically normal.

In view of these results, Dr. Cutler declares, "It is only too evident, therefore, that the problem of laryngeal cancer hinges mainly on early diagnosis. No form of internal cancer offers a more favorable opportunity for early detection. The main difficulty lies in the fact that hoarseness is such a common symptom associated with the presence of a cold. . . ."

---

Tuberculosis is not always a poor man's disease, but savings of a considerable amount which a few may possess at the beginning of their illness are expended in most instances long before the course of treatment is finished.—The Modern Attack on Tuberculosis by H. D. Chadwick, M.D. & A. S. Pope, M.D. 1942

## URGE BLOOD STUDY FOR ALL WHO RETURN FROM MALARIOUS AREAS

### Two Army Officers Find Malaria Organisms In Blood Of Italian War Prisoners Who Said They Had Never Had The Disease

The blood of all persons who have returned from areas where malaria is prevalent should be carefully examined and all those found to have in their blood the organisms that cause the disease should be treated, even though they have no symptoms, Captain Stanis P. Carney, Sanitary Corps, and Captain Noah B. Levin, Medical Corps, Army of the United States, advise in *The Journal of the American Medical Association* for April 8. In an examination of 2,723 Italian prisoners of war who had seen service for varying periods in malarious regions, the two army officers found the organisms causing malaria still in the blood of some of the prisoners months after evacuation from a region where malaria

(*Continued on page* 54)

in whooping cough

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MALARIA (Continued)

was prevalent. They found parasites in the blood of men who had maintained they never had had the disease, and also that malaria may be contracted with no symptoms of active disease until months after infection.

It is emphasized by the authors that "No expectation of the residual malarial rate of United States troops can be predicated from these (finding). A great many of the Italians grew up in malarious regions and were exposed and infected long before their period of military service, while only a relatively small percentage of American soldiers come from areas where malaria is present in any degree at all. The antimalaria precautions taken for United States troops in the field also serve to keep the incidence of malaria down. An advice from the office of the Surgeon General of the United States Army indicates that the incidence of parasitemia (parasites in the blood) in the absence of clinical symptoms for our returned troops is much lower than the figures reported here for the prisoner group. In spite of these differential factors, we feel that this study emphasizes the necessity for careful examination of blood smears for all personnel who have returned from areas where malaria is prevalent and the need for treatment to sterilize the blood in all cases of parasitemia. This will serve the double purpose of protecting the person from further attacks and of eliminating him as a carrier."

Of the 2,723 prisoners examined, 257 or 9.7 per cent had a positive blood smear; 56 or 2.1 per cent had active malaria; 188 or 6.5 per cent had a history of malaria; 33 or 59 per cent of those with active malaria had no history of malaria and 212 or 83 per cent of those with positive smears had no history of the disease.

The authors explain that it soon became apparent that malaria was going to be a problem of some concern in the prison camp "since immediately after arrival of the prisoners cases of malaria began to appear. The first question which arose was the problem of transmission of the disease to the uninfected prisoners, to the army personnel attached to the camp and to the nearby civilian population. This was satisfactorily answered by the results of two mosquito surveys made in the area in which the camp is located, one made by the state university and the other under the direction of the Seventh

Service Command, in both of which no anopheline mosquitoes were found. (This is the type of mosquito that transmits malaria.) As an added precaution, however, all men hospitalized for malaria were screened by mosquito bars after dusk.

"The proposal to send some of the prisoners to work on farms in the region of the camp raised another question. Since, in many cases, side camps were to be set up, sometimes many miles away from army hospital facilities, it was decided to make an attempt to locate all men with parasitemia."

## RARE CASE OF SILICOSIS CAUSED BY WHEAT DUST IS REPORTED

### Toledo Physicians Tell Of Elevator Worker With Lung Disease Generally Found Only Among Miners And Stone Workers

A case of silicosis caused by wheat dust is reported by Thomas F. Heately, M.D., Dalton Kahn, M.D., Toledo, Ohio, in *The Journal of American Medical Association* for April 1. Silicosis is a disease of the lungs caused by fine particles of silica. It is generally found among workers in mines and tunnels, stone cutters, especially granite workers, and sand blasters. Wheat dust has been rarely reported as a cause of the disease.

The three Toledo physicians say that a man, aged 55, came to them March 4, 1941 with a complaint of severe difficulty in breathing on exertion, a dry cough and pain in the chest. Up until 1929, when he took a job with a railroad unloading cars of wheat and storing the wheat in elevators, he had never lost time from illness or sought medical advice. Part of his work was in a tunnel where a traveling belt carried the wheat to an elevator and dumped it there. In 1937 he was obliged to quit because of progressive shortness of breath. He had no history of pneumonia of tuberculosis nor was there any demonstrable evidence of either disease when the three physicians examined him. It was found that he had advanced silicosis. These findings were significant in view of the fact that it is estimated that about 75 per cent of those who develop silicosis die of tuberculosis. Examination of the dust in the tunnel revealed that the silica content was 9.96 per cent and in that in the car 19.96 per cent.

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## THERMOMETER SHOULD BE LEFT IN MOUTH A MINIMUM OF THREE MINUTES

Investigation has shown that a thermometer should be left in the mouth a minimum of three minutes in order to obtain the accurate temperature of the body, *The Journal of the American Medical Association* reports. It advises that in view of this manufacturers should eliminate time designations from their instruments. *The Journal* says:

"How long does it take a clinical thermometer to record body temperature accurately? The answer apparently is not known by all those who use this instrument of precision, according to N. DeNosaquo, I. Kerlan, L. Knudsen and T. G. Klumpp. In order to learn what schools of nursing are teaching with respect to taking temperatures, a questionnaire was sent to one hundred outstanding schools. According to the replies, twenty-seven schools taught their students that the time required for accurate registration was less than three minutes, thirty-seven stated three minutes and only five recommended an interval longer than three minutes. Many clinical thermometers on the market bear such designations as '½ minute,' '1 minute' or '60 seconds,' which obviously suggests to the user that the time required to register body temperature is that inscribed on the instrument.

"The authors conducted a clinical and physical study to determine, first, how long it takes instruments of various makes and types to record body temperature and, second, whether or not there is any consistent difference between instruments bearing different time designations. On the basis of a series of observations, the validity of which was statistically controlled, the authors concluded that an insertion time of three minutes should be the minimum interval for oral clinical thermometers under ordinary conditions of use. It was also found by them that variations in the configuration of the bulb made no appreciable difference in the time required to reach the final reading. Similarly the time stamped on the thermometer did not have any relation to the length of time required by the instrument to reach equilibrium, and in all

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circumstances a longer time was needed to give an accurate reading than that imprinted on the thermometer to give an accurate reading.

"In view of these observations it would seem to be a good thing for thermometer manufacturers to eliminate from their instruments time designations, which can only be misleading and result in serious diagnostic and therapeutic misimpressions.

"There is no instrument of precision that is more valuable in the diagnosis and prognosis of disease than the clinical thermometer. It is therefore essential that it be given sufficient time to record accurate information. There is a temptation these days to rush everything; but when it comes to taking temperatures it is the course of wisdom to make haste slowly."

## LEUKEMIA INCIDENCE AMONG DOCTORS

Leukemia may occur in workers with radiation from x-ray or radium under conditions like those in which cancer of the skin due to radiation can arise, *The Journal of the American Medical Association* for April 15 points out. Exposure to x-rays under experimental conditions favors the development of leukemia in animals. Since high energy radiations may play a part in human leukemia, workers in the National Cancer Institute have compared the incidence of leukemia in physicians and in the general population on the basis of the death lists of physicians in *The Journal*, the mortality reports of the United States Bureau of the Census and an unpublished compilation of the United States Public Health Service. The ratio of deaths from leukemia to deaths from cancer, the ratio of deaths from leukemia to total death rates, and death rates from leukemia were studied with the result that leukemia "was recognized approximately 1.7 times more frequently among physicians than among white males in general population." The result is in accord with the increase in the incidence of leukemia in animals exposed to x-rays. Whatever the full meaning of the data at hand may be, the hazards of radiation require the strict maintenance of complete protection at all times.


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## RED BLOOD CELL TRANSFUSION SERVICE STARTED BY RED CROSS

A Red Cell Transfusion Service, conducted by the Blood Donor Service of the American Red Cross, is being extended from two investigative blood donor centers in Detroit to those in the country which are proximate to the plasma processing plants, it is reported in *The Journal of the American Medical Association* for April 1. Major Earl S. Taylor, Medical Corps, Army of the United States, and William Thalhimer, M.D., Technical Director and Associate Technical Director, respectively, of the American Red Cross Blood Donor Service, and Warren B. Cooksey, M.D., Technical Supervisor, Red Cross Blood Donor Service, Detroit, announce the new service.

They explain that on the basis of investigative work with ten thousand red cell transfusions, it appears that this by-product of the plasma program for the armed services is suitable for transfusion use as a substitute, at least in part, for whole blood. The new service will be available first to Army and Navy hospitals and secondly to accredited civilian hospitals, without cost, for clinical investigation. In another report in the same issue of *The Journal* Dr. Cooksey and Captain William H. Horwitz, Medical Corps, A. U. S., present their findings from the ten thousand red cell transfusions. They found fewer reactions from red cell transfusions than from whole blood and striking clinical improvement in several anemic patients.

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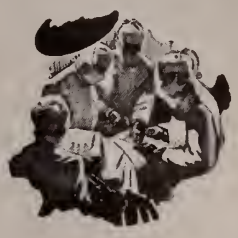
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## SAYS RESUSCITATION CONCEPTS WRONG

"Resuscitation of the drowned is not merely working the bellows of the lungs but a fight to revive cold asphyxiated nerve cells by a circulation of warm blood oxygenated by moving lungs," Frank C. Eve, M.D., Hull, England, declares in *The Journal of the American Medical Association* for April 1. "Our old comfortable confidence in Schafer's method has been roughly shaken," he continues, adding that Silvester's method (extending the arms and then compressing the chest with them) is in many ways better, and his recently developed rocking method seems more promising still. In the latter method the patient is placed face down on any surface that can be rocked in the manner of a seesaw. This method has been adopted by the British Royal Navy and Schafer's method is used promptly and until rocking can actually begin, Dr. Eve says.

"The term artificial respiration," he declares, "seems dangerously misleading because it focuses attention on ventilating the lungs. I submit that resuscitation is actually a trinity of ventilation, circulation and warmth directed to supplying warm blood, oxygenated by moving lungs, to the microscopic nerve cells which maintain respiration and tone. These are situated where brain and spinal cord unite and can (I found) be paralyzed by cold and quickly revived by warmth. . . . Probably in the future the merits of rival methods of resuscitation will be judged more by their effects on the circulation than on ventilation, which is so much easier to produce and to measure. For air in the lungs is useless unless the oxygenated blood is conveyed to the dying nerve cells. . . ."

Dr. Eve says that the Schafer method depends entirely on the elastic tone of muscles for inspiration when the pressure of the hands is taken off the patient's back. This tone is not present except in milder cases. He concludes his paper with the admonishment that "Uncomplacently we must all 'go to school' again. More experiments are badly needed: resuscitation is in the melting pot."

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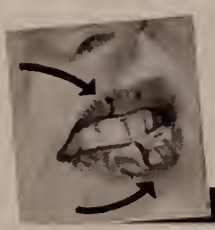
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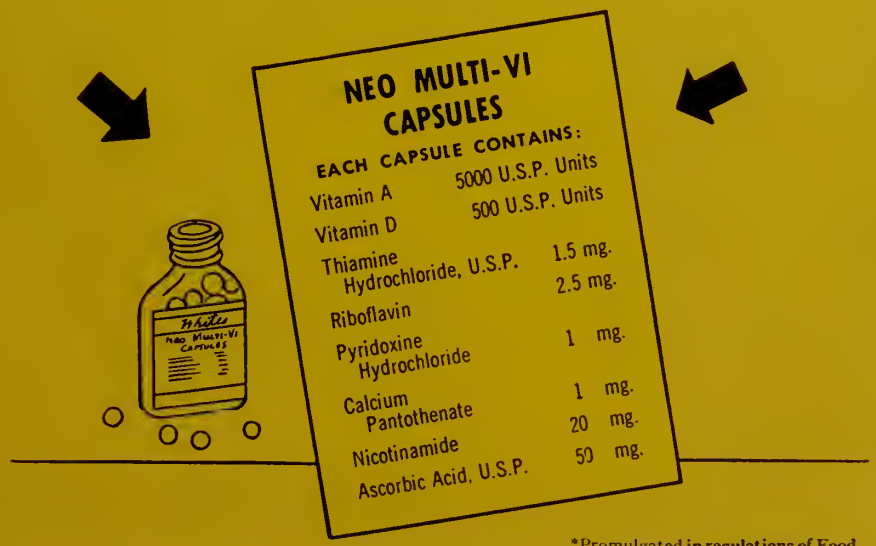
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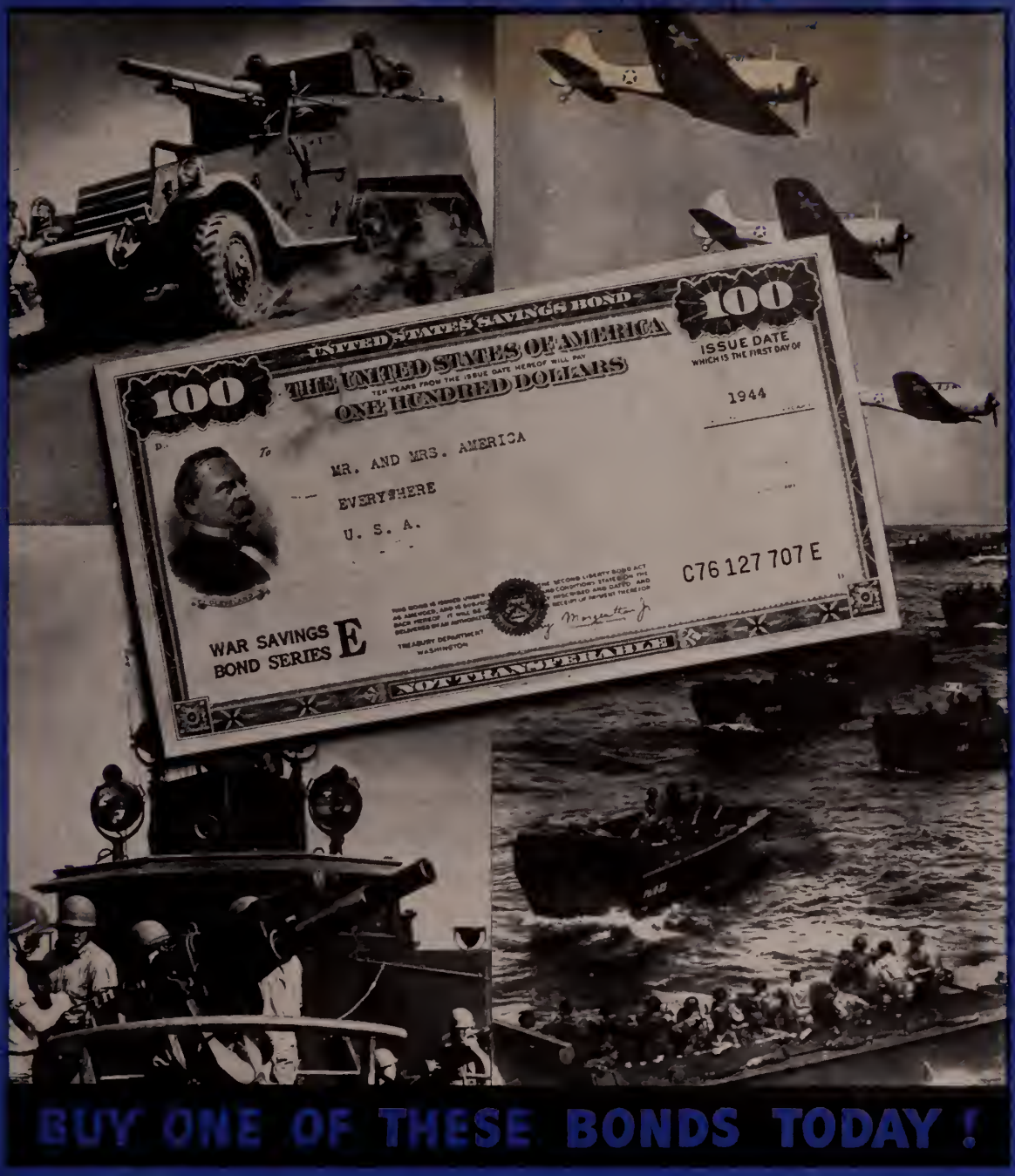
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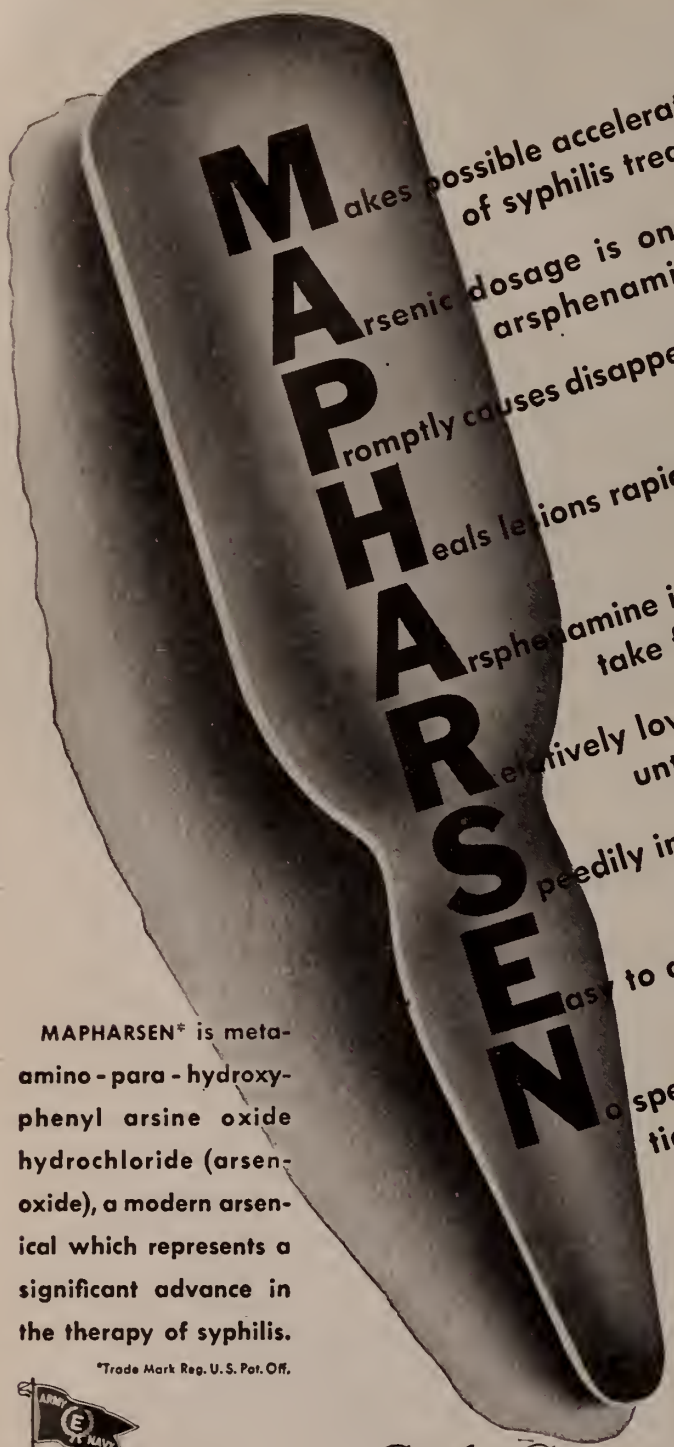
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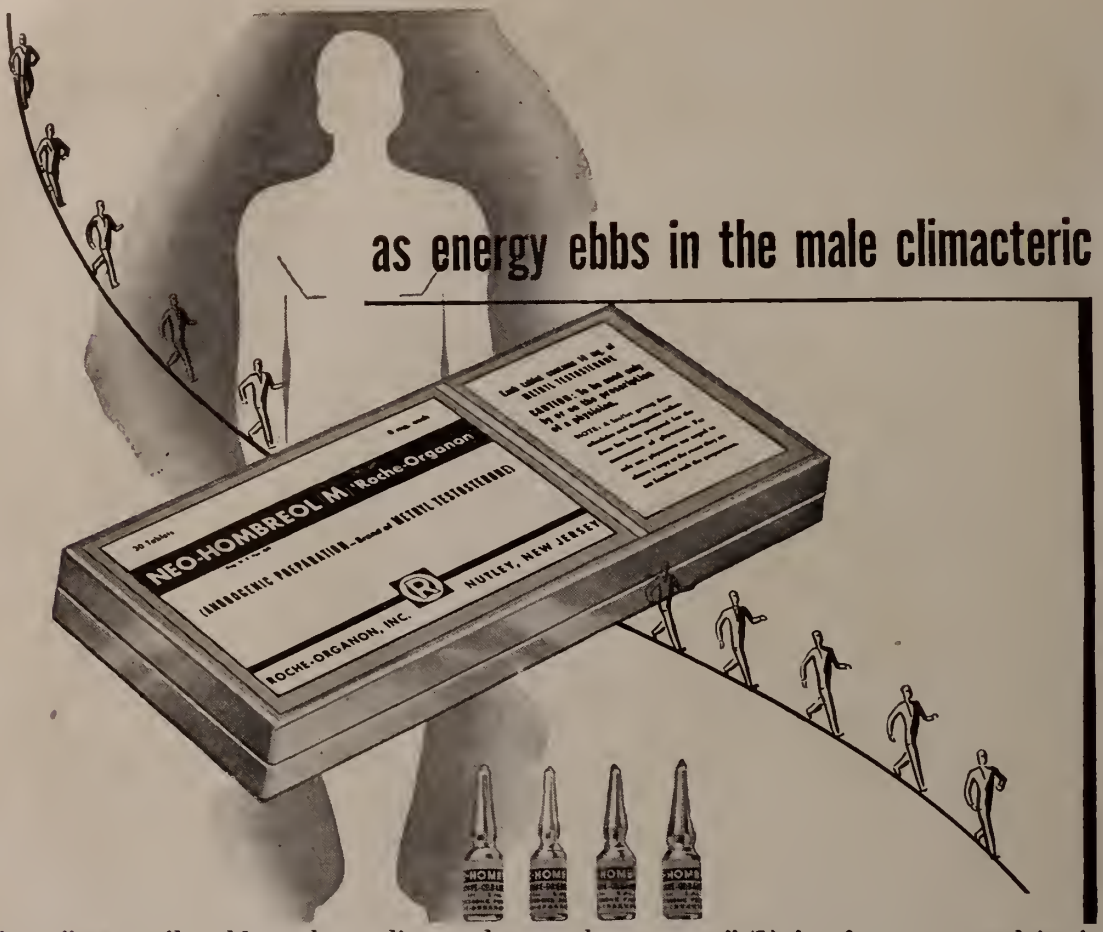
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(1) Goldman & Markham: *J. Clin. Endocrinol.*, 1942, *2*:237. (2) Douglas: *J. Urol.*, 1941, *45*:404. (3) Werner: *J. Urol.*, 1943, *49*:872. (4) Miller, Hubert, & Hamilton: *Proc. Soc. Exper. Biol. & Med.*, 1938, *38*:538.

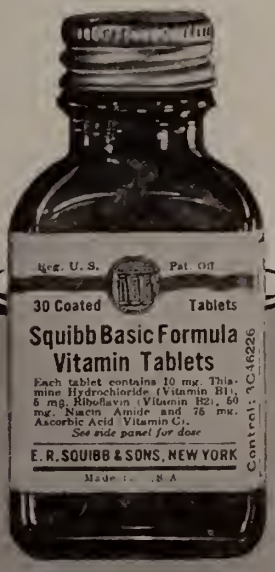



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THE rationale of this most effective new local sulfonamide treatment lies in this:

Even a single tablet produces, throughout the entire oropharyngeal area—for as long as one hour's chewing—a concentration of *locally active* sulfathiazole, dissolved in saliva, averaging 70 mg. per cent. Yet even with *maximal* dosage over a prolonged time-

# FOR THE MORE EFFECTIVE LOCAL SULFONAMIDE TREATMENT OF OROPHARYNGEAL INFECTIONS

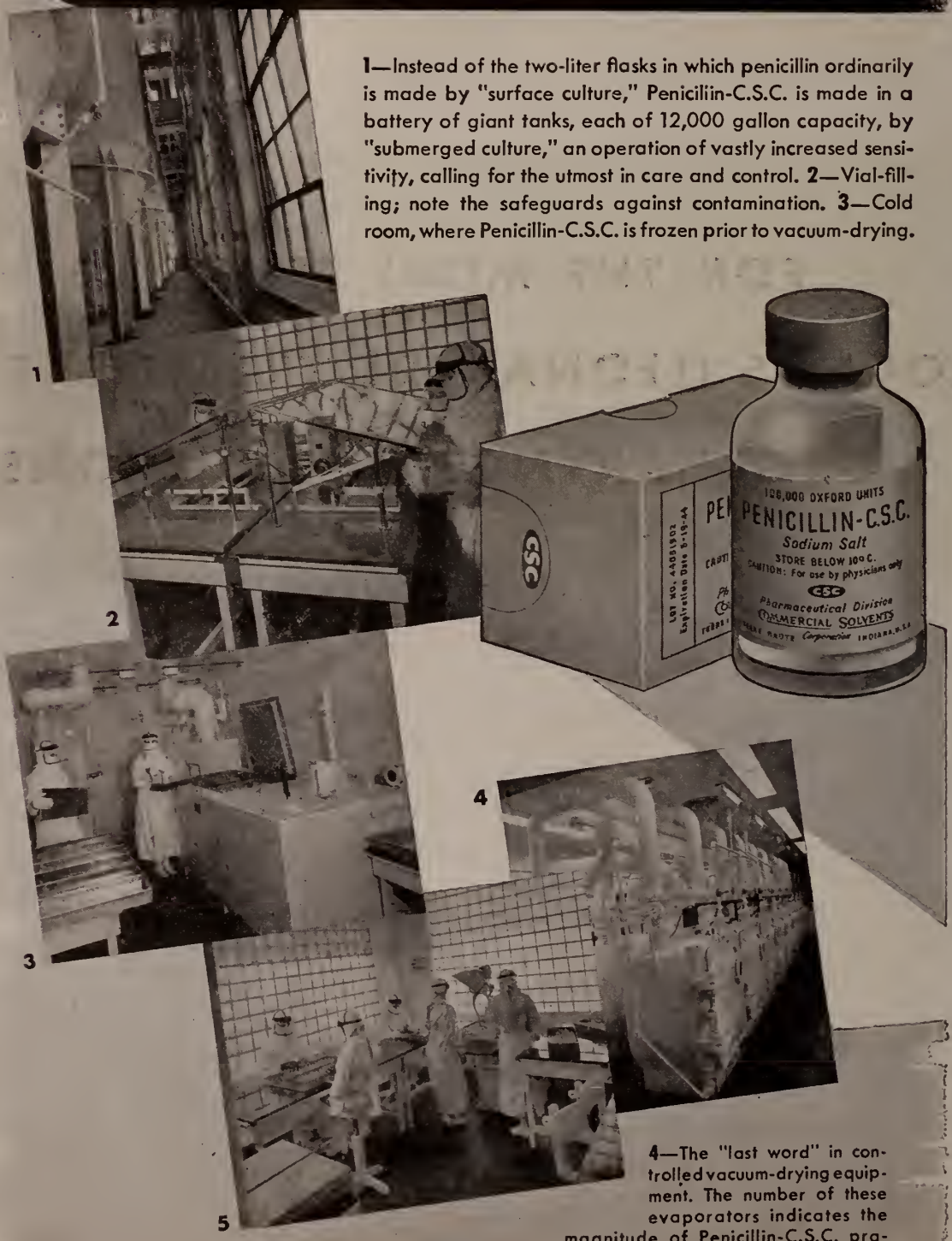
period—and even in children—blood levels produced are so low as to be immeasurable for the most part, and only rarely even approach 1 mg. per cent.

Local efficacy, and freedom from systemic toxicity, have been proved in wide clinical experience to be as impressive as the striking figures cited above would suggest.

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# *An Achievement in*
# PROTECTION AGAINST CONTAMINATION




**1**—Instead of the two-liter flasks in which penicillin ordinarily is made by "surface culture," Penicillin-C.S.C. is made in a battery of giant tanks, each of 12,000 gallon capacity, by "submerged culture," an operation of vastly increased sensitivity, calling for the utmost in care and control. **2**—Vial-filling; note the safeguards against contamination. **3**—Cold room, where Penicillin-C.S.C. is frozen prior to vacuum-drying.

**4**—The "last word" in controlled vacuum-drying equipment. The number of these evaporators indicates the magnitude of Penicillin-C.S.C. production. **5**—Vial-sealing and capping.

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WALLS of highly polished opal glass and translucent glass brick, and rounded floor and ceiling abutments, permitting of maximum cleanliness—

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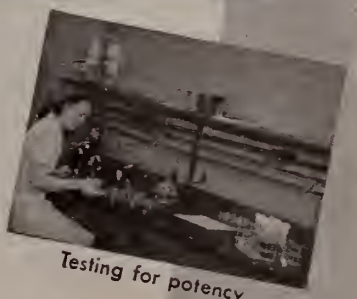
these are but a partial list of the safeguards employed in the "sterile area" of the C.S.C. plant.

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This combination of mass production methods, skilled personnel, the utmost in safeguards, and unremitting laboratory control spells two assurances—

Penicillin-C.S.C. will always be of dependable potency, sterility, and pyrogen-freedom—

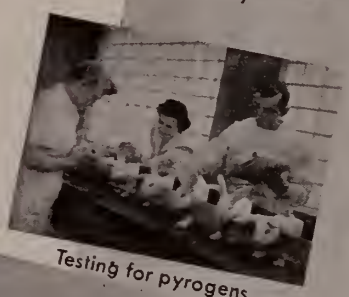
Penicillin-C. S. C., now allocated as the armed forces direct, will be available in adequate distribution throughout the country as soon as released.



Testing for potency



Testing for toxicity



Testing for pyrogens

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# Safe, Gentle Bulk with Specific Advantages

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*This highly purified hemicellulose is available in 4-oz. and 16-oz. bottles as Mucilose Flakes and Mucilose Granules.*
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# ADEQUACY

## OF INTERNAL MENSTRUAL PROTECTION...

Both in independent laboratory tests and in careful clinical studies, Tampax tampons have been shown to possess a wide margin of safety in providing for intravaginal absorption of the flux.

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In a recent study[2] of 110 young nurses employing Tampax tampons for catamenial protection, it was found that "95 per cent used tampons with satisfaction all through menstruation."

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The results of this research parallel the experience of thousands of women who have found that Tampax affords thoroughly adequate protection.

(1) Am. J. Obst. & Gyn., 35:839, 1938. (2) West. J. Surg., Obst. & Gyn., 51:150, 1943. (3) Clin. Med. & Surg., 46:327, 1939. (4) Med. Rec., 155:316, 1942.

TAMPAX *accepted for advertising by the Journal of the American Medical Association*

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PALMER, MASSACHUSETTS

Please send me a professional supply of the three absorbencies of Tampax.

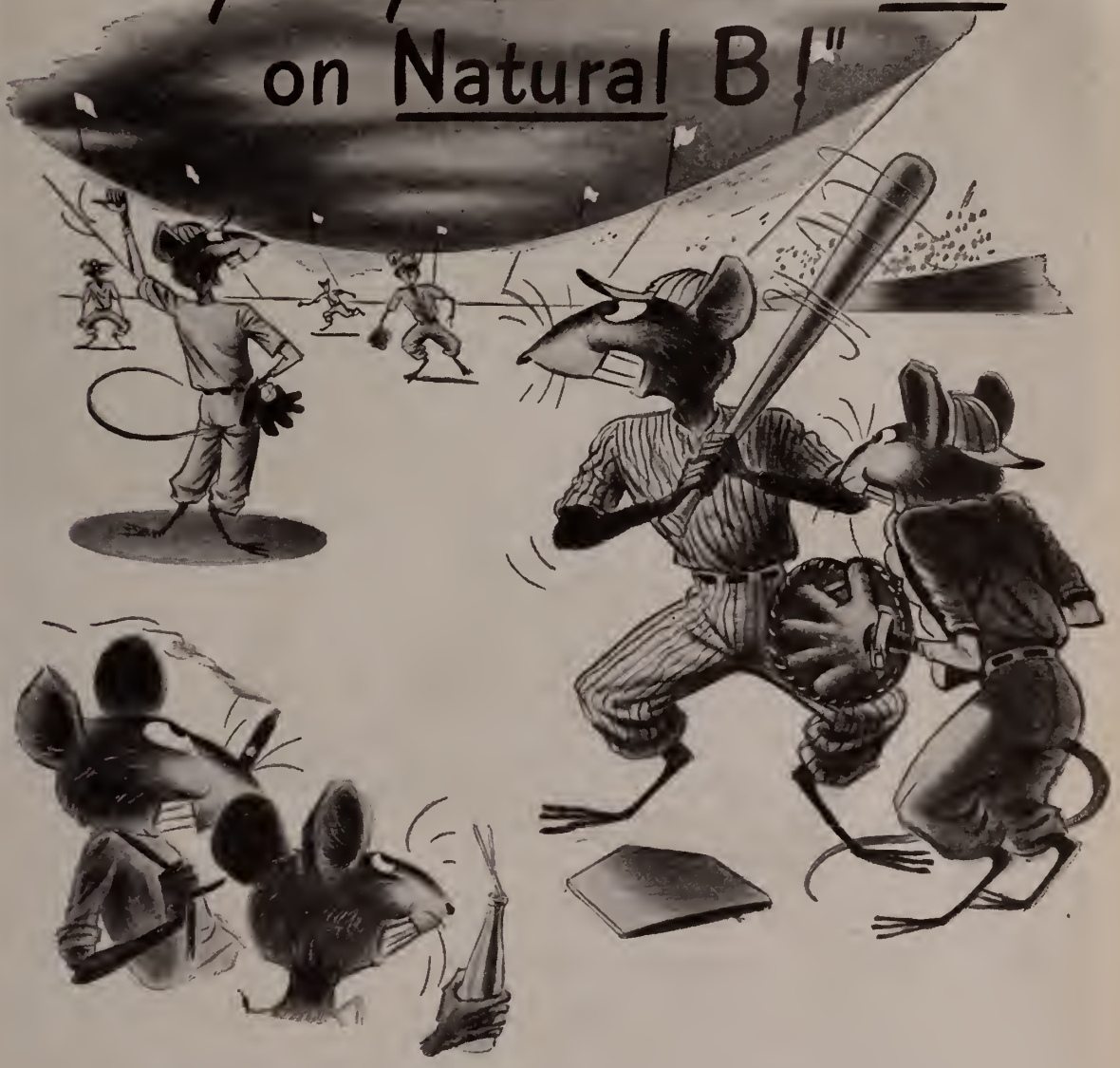
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**2.** This dramatic nutritional response is *not* obtainable with *any* combination of crystalline B vitamins or synthetic vitamin B mixtures.

It's the same with humans: clinical results show the superiority of natural vitamin B complex. Elixir B-Plex is derived from yeast—the richest *natural* source of the *complete* vitamin B complex.

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**ELIXIR B-PLEX** *Wyeth* REG. U.S. PAT. OFF.

REG. U. S. PAT. OFF.




**THE NATURAL VITAMIN B COMPLEX**

# a complete unit for approved contraceptive technique

provides for patient comparison of Jelly and Cream (no extra cost)




The Koromex Set Complete contains in a handsome case:

**Koromex Diaphragm with special pouch**

**Koromex Trip Release Introducer (takes all size diaphragms)**

**Tube Koromex Jelly (higher lubricating factor)**

**Tube Koromex Cream (lower lubricating factor)** formerly H R Emulsion Cream

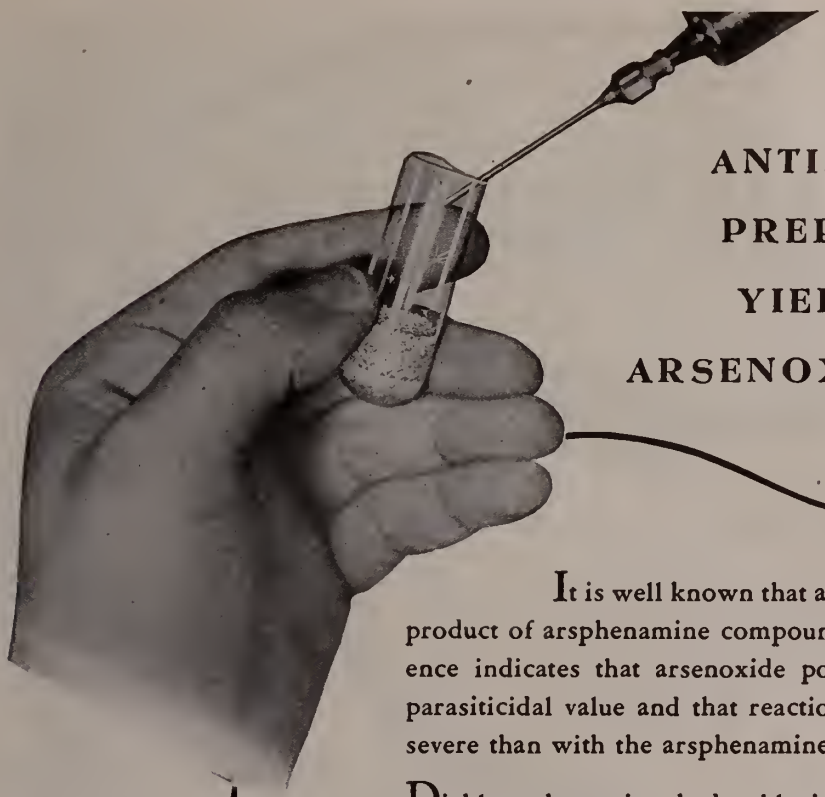
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Price of Koromex Set Complete is only that of the Koromex Diaphragm and Koromex Trip Release Introducer. Attractively packaged with removable label. To prescribe, just write "Koromex Set Complete" and state size of diaphragm. **Write for literature.**

**Holland-Rantos** *Company, Inc.*

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All forms of syphilis—primary, secondary, tertiary, congenital—are treated with Dichlorophenarsine hydrochloride—Winthrop.

*Booklet containing essential details sent to physicians on request.*

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*Pharmaceuticals of merit for the physician*

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***A RICH ROUND-UP***

of *all* the natural B factors from their most potent natural sources—liver, rice and yeast —with added thiamine hydrochloride, riboflavin and niacin amide.

Elixir 'Omni-Beta' is a *complete* B-complex preparation, blended and made easy to take in a delicious elixir, each fluidounce of which provides: thiamine hydrochloride, 12 mg.; riboflavin, 16 mg.; niacin amide, 80 mg.; pantothenic acid, 11 mg.; pyridoxine hydrochloride, 2.8 mg. Bottles of 4 and 8 fluidounces.

William R. Warner & Co., Inc., New York 11, N. Y.

***Elixir 'Omni-Beta'***
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VITAMIN B COMPLEX

OMNIS ORBIS
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ESTABLISHED 1856



# *Pleasure grows from day to day*

Mother's delight in her baby grows from day to day when a smooth feeding routine helps to keep him healthy and happy.

'Dexin' formulas are easily taken, for 'Dexin' is exceptionally palatable, not over-sweet, and does not dull the appetite. Supplementing the diet with other bland foods is facilitated.

'Dexin' helps assure uncomplicated digestion and assimilation. Its high dextrin content promotes the formation of soft, flocculent, easily digested curds. Distention, colic and diarrhea are avoided because of the relatively non-fermentable form of carbohydrate. 'Dexin' is readily soluble in hot or cold milk.

'Dexin' Reg. U.S. Patent Office




*'Dexin' does make a difference*

| COMPOSITION | | | | |
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| | Dextrins . . . . . | 75% | Mineral Ash . | 0.25% |
| | Maltose . . . . . | 24% | Moisture . . | 0.75% |

Available carbohydrate 99% 115 calories per ounce
6 level packed tablespoonfuls equal 1 ounce

# 'DEXIN'

HIGH DEXTRIN CARBOHYDRATE

*Literature on request*

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# FOR *Convenience* AND FLEXIBILITY OF DOSAGE




Bethiamin presents crystalline thiamine hydrochloride in three forms and in a range of dosages adequate for every need. For oral administration palatable Bethiamin Elixir provides 6 mg. of thiamine hydrochloride per ounce, and Bethiamin Capsules are available in dosages from 1 mg. to 15 mg. For parenteral administration Bethiamin ampuls are available up to 100 mg. per cc. Thus Bethiamin places at the physician's hands dependable vitamin $B_1$ medication in the most convenient form.

# BETHIAMIN




For oral administration, Bethiamin, the Massengill brand of thiamine hydrochloride, is available in capsules containing 1 mg., 3⅓ mg., 10 mg., and 15 mg.; for parenteral administration, in 1 cc. ampuls containing 1 mg., 10 mg., 50 mg., 100 mg. and in 10, 30 or 60 cc. rubber-capped vials. In liquid form Bethiamin Elixir contains 6 mg. of thiamine hydrochloride per fluidounce.

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# *Heroes of the United States Medical Services*



DR. DAVID TOWNSEND
*(1753-1829) U. S. Public Health Service*

WHEN in 1809, the United States Government established the Boston Marine Hospital, Dr. Townsend was appointed Physician-in-Charge. The institution was founded for the care of sick and disabled seamen. Many years of distinctive service in this Marine Hospital gave Dr. Townsend the experience which laid the groundwork for government-sponsored Public Health Service to civilian groups. Veteran surgeon at Bunker Hill and Valley Forge, Dr. Townsend's battle experience and his preliminary efforts in the early nineteenth century helped lay the foundation for the invaluable U. S. Public Health Service of today.

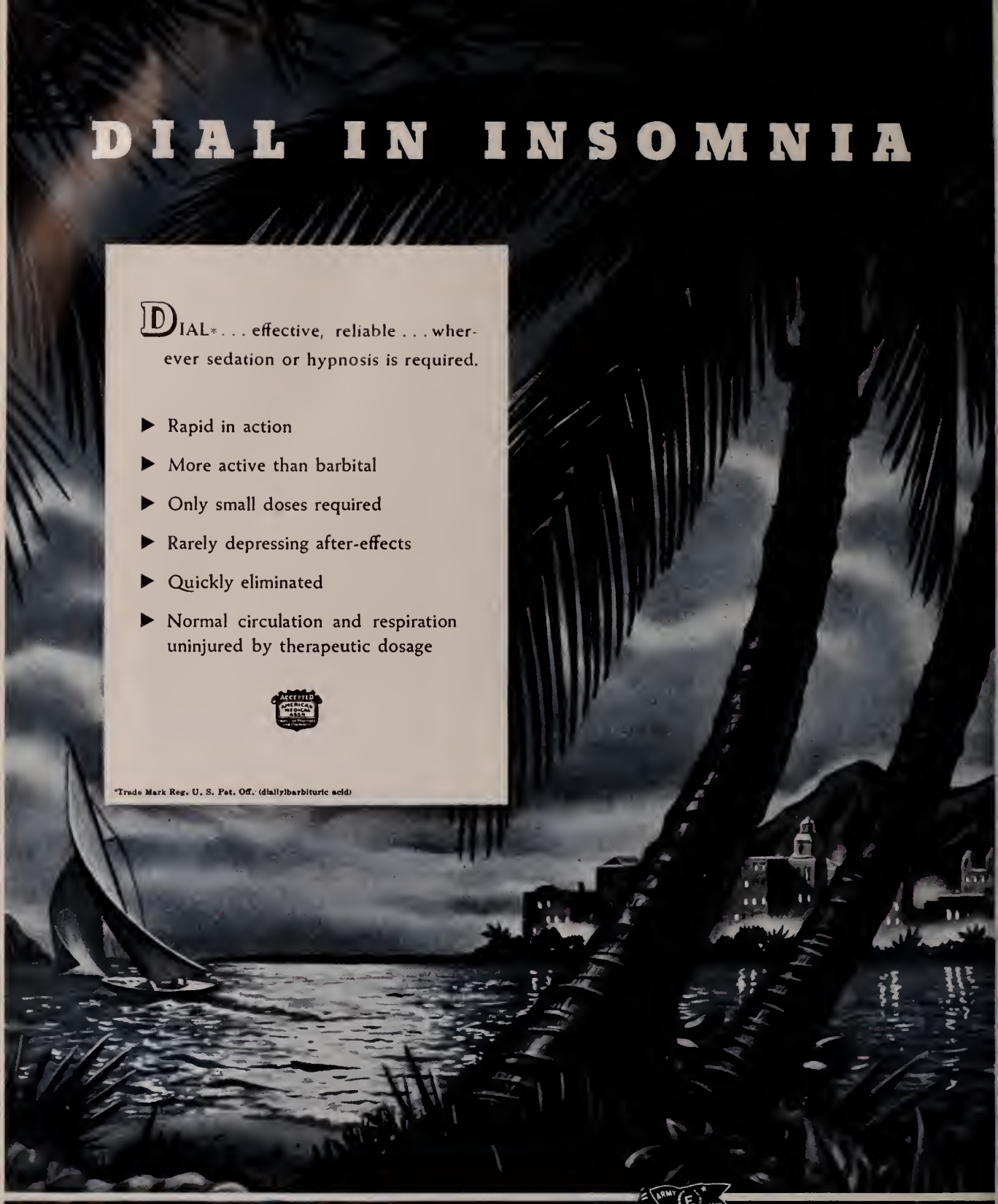
Ciba Pharmaceutical Products, Inc. salutes the medical men in the Services of the United States as well as those in civilian forces responsible for health "behind the lines."

## Pioneer Marine Service Physician



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# PENICILLIN
## MERCK

## A RECORD OF PERFORMANCE

THOROUGHGOING experience and established leadership in organic research, development, and production have been the determining factors in the rapid achievement of large-scale Penicillin production by Merck & Co., Inc.

Intensive research on Penicillin, begun in the autumn of 1940, established a sound basis for the successful development of mass production. By applying chemical engineering principles to the manufacture of this intrinsically unstable and difficultly produced substance, Merck & Co., Inc. succeeded in devising and perfecting a practical method of production, based on the mass-fermentation principle.

The following chronologic review tabulates the more important advances leading to the present volume of Penicillin production, including some of the contributions that we have been privileged to make:

**1929**—Penicillin discovered by Fleming in England.

**1932**—First report by British investigators confirming original work on Penicillin.

**1940**—First isolation of solid Penicillin by Oxford investigators.

**1940**—Merck research on antibiotics concentrated on Penicillin.

**1941**—First report of Penicillin's clinical value.

**1941**—Prof. H. W. Florey and Dr. N. G. Heatley, of the Oxford group, visited the United States to confer with interested Government officials and manufacturers, with the objective of establishing Penicillin production in America.

**1941**—Dr. Heatley, who participated in the first production work in England, remained at the Merck Research Laboratories to collaborate with Merck chemists in developing test and production procedures.

**1941**—Merck brought about a reciprocal arrangement between British and American investigators to spur production in cooperation with the United States and British governments.

**1942**—Merck supplied Penicillin for first case of bacteriemia successfully treated with Penicillin in America.

**1942**—Merck Penicillin was rushed under police escort to Boston for treatment of the Cocoanut Grove fire casualties.

**1943**—Merck sent supplies of Penicillin to England by air transport for urgent therapeutic use by the United States Army Medical Corps.

**1943**—Large-scale production of Penicillin was established by Merck to meet Government requirements.

**1944**—Merck sends ever-increasing supplies of Penicillin to our Armed Forces.




*Merck & Co., Inc. will continue to surpass present production records, with the urgent objective of supplying adequate quantities of Penicillin for civilian use, as soon as the essential requirements of our Armed Forces have been fulfilled.*

MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N. J.

In Canada: Merck & Co., Ltd., Montreal and Toronto

***An illustrated booklet describing the clinical uses of Penicillin Merck is available on request.***

# This is a Transfusion!

IN WAR, DRAINED MINDS NEED THEM, TOO





In modern war, fright, shock—no less than wounded flesh—sap fortitude, shrink staying power. Restoring fighters' morale is a constant concern of the military doctor. Whether under front-line fire or sheltered in a base hospital, he knows the lift of a friendly smile, a helping hand—a cheering talk over a cigarette. A Camel, most likely, the first choice of service men* for the real mildness and that deeply appreciated flavor.

It's a busy life for the medical officer... and a tough one. He too appreciates precious moments of relaxation... with a Camel.

## *1st in the Service*

*With men in the Army, Navy, Marine Corps, and Coast Guard, the favorite cigarette is Camel. (Based on actual sales records.)




BUY WAR BONDS STAMPS

Camel COSTLIER TOBACCOS

New reprint available on cigarette research — Archives of Otolaryngology, March, 1943, pp. 404-410. Camel Cigarettes, Medical Relations Division, One Pershing Square, New York 17, N. Y.

# Control Summer Diarrhea

## WITHOUT CONSTIPATING EFFECT...

*with...*




### DOSAGE:

***At Onset:*** Teaspoonful every hour until normal evacuation with proper stool consistency is restored.

***Follow with:*** Teaspoonful before meals and at bedtime, reduce as indicated.

**ZymenoL** provides a twofold natural approach to the two basic problems of Common Diarrhea;

NORMAL INTESTINAL CONTENT REESTABLISHED
. . . through BREWERS YEAST ENZYMATIC ACTION*

NORMAL INTESTINAL MOTILITY RESTORED
. . . with COMPLETE NATURAL VITAMIN B COMPLEX*

This twofold natural therapy assures normal bowel function without constipating astringents and absorptives, artificial bulkage or catharsis.

*Write For FREE Clinical Size*

*ZymenoL contains Pure Aqueous Brewers Yeast (no live cells)

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Cal-C-Tose 'Roche'—a happy solution for the finicky, undernourished patient who cannot take tablets or capsules or who has grown tired of plain milk. Cal-C-Tose contains generous amounts of vitamins A, $B_1$, $B_2$, C, and D plus calcium and phosphorus, in an appetizing cocoa-malt base. Two heaping teaspoonfuls mixed with warm or cold milk makes a delicious "hot chocolate" or refreshing "milkshake." Supplied in 12-oz and 5-lb containers . . . .

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*In addition to our Professional Liability Policy for private practice we issue a special*

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*No Finer Name In Ethical Contraceptives*

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FOR
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NEW YORK, N. Y.




★ FROM THE BEGINNING, Eli Lilly and Company has been active in the development of Penicillin, and for several months has made it available to the armed forces on government allocation and to the Office of Scientific Research and Development.

The material has been so scarce that very little has been available for civilian use, and then only on special assignment. Even in army and navy hospitals it often was restricted to patients unresponsive to sulfa-drug treatment.

Penicillin is now more generally available, and research to achieve the ultimate in chemotherapeutic perfection continues as a major project in the Lilly laboratories.

Eli Lilly and Company, Indianapolis 6, Indiana, U.S.A.

☆ *BUY WAR BONDS FOR VICTORY*

The Illinois Medical Journal

June, 1944
VOL. 85, NO. 6

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Harry Culver, Walter Stevenson, Raymond W. McNealy.

# Editorials

## REPORT ON THE ANNUAL MEETING

The 1944 annual meeting of the Illinois State Medical Society was held at the Palmer House, Chicago, on May 16, 17, 18, 1944, in accordance with the published schedules and with a fine wartime attendance. With approximately 4,000 Illinois physicians now in service the registration of approximately 2650 was most gratifying to those who had worked over a period of months in making all necessary arrangements for the meeting.

Although several meetings were held on Tuesday morning, the 1944 annual meeting was opened officially at 1:00 p. m. when Mayor Edward J. Kelly of Chicago gave a highly interesting address of welcome, paying his respects to the medical profession of Illinois for its active participation and contributions to the war efforts.

On Tuesday evening Paul Dudley White of Boston delivered the Oration in Medicine, discussing the subject, "Reversibility of Heart Disease." This interesting talk was well illustrated by slides and was undoubtedly one of the highlights of the annual meeting.

The annual dinner on Wednesday evening taxed the facilities of the spacious Grand Ballroom of the Palmer House, but everything had been carefully arranged and the program was carried out exactly in accordance with the plans. Edgar Ansel Mowrer, noted columnist, commentator and writer had just returned from the European theater of war, having been on all fronts. He gave a highly interesting and instructive talk telling of conditions throughout Europe, and giving much information of general interest. He had returned to the United States only four days previous to his appearance, and his talk was well received indeed.

The Oration in Surgery was delivered by Brigadier General Fred W. Rankin who has been in the office of the Surgeon General since the outbreak of war. His subject was "Progress in the Army Medical Service." Dr. Rankin, the immediate past-president of the American Medical Association, gave a highly instructive and well illustrated talk showing the work of the medical corps of the U. S. Army, and giving interesting contrasts between the present day medical services in war and those of World War I.

The usual fine display of exhibits, both technical and scientific, was set up in the large Palmer House exhibition hall with every available space occupied. Unusual care was exercised in the selection of these exhibits, and every effort was made to increase the interest of those attending the meeting in regard to the exhibits, as they were all worthy of careful consideration.

The first meeting of the House of Delegates

was opened by the acting president, Robert S. Berghoff, and short memorial tributes to the last president, George W. Post, and the late councilor, John S. Nagel, were delivered respectively by Oscar Hawkinson and G. Henry Mundt.

The annual reports were allocated as usual to carefully selected reference committees, instructed to go over them carefully and to report back to the House at the second meeting.

The second meeting of the House of Delegates was held on Thursday morning, May 18th at which time the usual election of officers, members of the Council, Delegates and Alternates to the American Medical Association, and personnel of the Constitutional Committees, was held. The Reference Committees rendered their reports and these were acted upon by the House. Then the resolutions which had previously been referred to the Committee on Resolutions, were read and action taken upon them individually.

The following were elected at this second meeting of the House:

President-Elect ..... Robert S. Berghoff, Chicago
First Vice-President ..... Harry M. Hedge, Chicago
Second Vice-President .... Walter C. Blaine, Tuscola
Secretary-Treasurer .. Harold M. Camp, Monmouth

Councilors:

First District ..... L. J. Hughes, Elgin
Second District ..... E. C. Cook, Mendota
Third District ..... Percy E. Hopkins, Chicago
Oscar Hawkinson, Chicago (to fill unexpired term of John S. Nagel)
Eleventh District ..... E. S. Hamilton, Kankakee

Delegates to the American Medical Association

G. Henry Mundt ..... Chicago
Rollo K. Packard ..... Chicago
John J. Pflock ..... Chicago
Charles H. Phifer ..... Chicago
Edwin S. Hamilton ..... Kankakee

Alternate Delegates to the American Medical Association

H. K. Scatliff ..... Chicago
D. B. Pond ..... Chicago
Gustav Kaufman ..... Chicago
Frank L. Brown ..... Chicago
Fred H. Muller ..... Chicago
Bernard Klein ..... Joliet

Some amendments to the Constitution and By-Laws were approved by the House of Delegates, and these will appear in the printed transactions of the meeting to be published in the

## ILLINOIS STATE MEDICAL SOCIETY

### GENERAL OFFICERS, 1944-1945

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**Everett P. Coleman, M.D.**

*President, Illinois State Medical Society*

1944-1945

July and August 1944 issues of the Illinois Medical Journal.

This 1944 annual meeting was a truly successful one in spite of the difficulties encountered in making the arrangements. The House of Delegates delegated the responsibility of selecting the place and making the necessary arrangements for the 1945 meeting to the council.

## THE ILLINOIS PLASMA PROGRAM

In the April 1, 1944 issue of the Illinois Medical Journal there was published an editorial comment on the Michigan plan for providing plasma for all counties within that state so that it would be available for any patient needing it regardless of the ability of the patient or the family for paying for this valuable therapeutic agent. Reference was made to the Illinois Plan but at that time, complete details were lacking as to the method by which it is placed in operation. We are pleased to present the Illinois Plasma Program at this time and hope that every physician within the state of Illinois will read this carefully and know how plasma may be procured, used and replaced, so that it may be available for all patients.

The Illinois State Department of Public Health initiated about a year ago a plan for making blood plasma available to any hospital in the State. The principal features of this program are as follows:

1. The Department of Public Health places on deposit with a hospital a supply of plasma sufficient to treat several patients. The supply is determined by the size and potential needs of the hospital.

2. The hospital agrees to replace promptly any of this plasma that is used. Replacement may be made in any one of three ways. These are:

(a) Outright purchase of any plasma processed in a laboratory approved for this purpose by the National Institute of Health.

(b) Collect sufficient blood to replace the plasma from relatives or friends of the patient. Ship this blood to the Samuel Deutsch Serum Center in Chicago for processing. The cost for processing will be paid by the patient, hospital or community.

(c) Collect and ship to the Samuel Deutsch Serum Center sufficient blood to yield twice the amount of plasma needed for replacement. The hospital incurs no cost for processing.

The foregoing program was designed with the purpose of bringing about decentralization and insuring local participation and permanency. The collection of blood as a local responsibility will insure an adequate supply of blood for plasma, because in most instances there are relatives and friends of patients who are very willing to furnish blood for the patient. This is particularly true, since the wide publicity of the Red Cross Blood Plasma program has made the giving of blood a very common, every day practice. Furthermore, the local community responsibility of payment for plasma processing will keep the cost widely spread and avoid the necessity of very large State appropriations.

This plan insures a *safe product*, the most important of all factors in plasma therapy. The processing of plasma requires great care and rigid testing to insure a safe product. By making provision that this product be always made in a laboratory approved for that purpose by the National Institute of Health, it will insure to the patients in Illinois hospitals a safe and innocuous product at all times.

A valuable feature of the program is the cooperation of a laboratory conveniently located within the State, licensed by the National Institute of Health already fully equipped and staffed with highly trained personnel, with a broad experience in the manufacture of human serum and plasma. Furthermore, by unifying all work in the one laboratory, duplication of essential equipment will be avoided and costs of processing reduced to a minimum.

The success of this plan requires the interest and cooperation of the medical profession. Teamwork between the hospitals, the medical profession and the State Department of Public Health should result in smooth, effective operation and safe plasma available to everyone in the State who needs it.

## PENICILLIN FOR CIVILIAN USE

Supplies of penicillin are increasing gradually, although up to this time only a limited quantity has been available for emergency civilian use. Now that the supply has been increased through rapidly expanding production, there will be a greater amount of penicillin available for civilians. This may be procured when indicated, through the War Production Board Office of Civilian Penicillin Distribution, 226 West Jackson Blvd., Chicago 6, Illinois.

When there is an apparently definite indication for its use, the physician may call the Chicago office. If the application is approved, the supply of penicillin will be forwarded and billed to the hospital where it is to be used. Hospitals in twenty-two Illinois cities, including 44 hospitals in Chicago, have been included on the list of "depot hospitals" by the advisory panel of the

Office of Penicillin Distribution, for the proper storage and distribution of penicillin for civilian medical use. It is stated that requests from other hospitals to be added to this list, will be received, and if the need is established, they may be added.

It must be remembered that penicillin is not indicated in the treatment of many diseases. The physician desiring to use this valuable product should review all recent literature and be reasonably sure that it is indicated in the treatment of the disease under consideration before making application for penicillin so that none of it will be wasted.

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## AWARDS FOR SCIENTIFIC EXHIBITS

There were an unusually large number of fine scientific exhibits at the 1944 Annual Meeting which made it more difficult for the Committee on Awards to make their selections of those outstanding exhibits for which prizes were to be awarded.

The awards were as follows:—

Gold Certificate: "Toxemia of Pregnancy"; F. H. Falls, Dept. of Obstetrics and Gynecology, College of Medicine, University of Illinois; Charlotte S. Holt, Division of Public Health Instruction, State Department of Public Health, Chicago.

Silver Certificate: "Amoebiasis"; J. M. Lubitz, P. A. Surgeon, United States Public Health Service, U. S. Marine Hospital.

Certificates of Merit:—

(1) "The Peoria Plan for Human Rehabilitation". Harold A. Vonachen, Caterpillar Tractor Company, Peoria.

(2) "Pulmonary Tuberculosis and Other Diseases of The Chest". Differential Diagnosis and Treatment. Municipal Tuberculosis Sanitarium, Chicago.

(3) "Carcinoma of the Colon"; Danley Claughter, L. G. Rossiter; Warren H. Cole; University of Illinois College of Medicine, Department of Surgery.

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## OUT OF THE MOUTHS OF BABES

"A better home is a place my dad is proud to support, my mother loves to take care of, and we like to be in. It is a place to grow old in."

School child who won the award for an essay on a better home. —*Minneapolis Star Journal.*

## LOW BACK PAIN: ITS PREVENTION AND TREATMENT

Hugh Burt, M.B., M.R.C.P.
In THE BRITISH JOURNAL OF PHYSICAL MEDICINE AND INDUSTRIAL HYGIENE, 7-1-17, January-February, 1944.

(1) This paper is concerned with two groups of cases: those due to bad posture and those due to lesions in the deep structures of the back and buttock (Steindler's posterior division syndrone.)

(2) Faulty posture affects the problem in three ways: in itself it gives rise to backache, it predisposes to back pain from other causes; it prolongs the time of recovery.

(3) There are four main types of faulty posture: the lordotic back, the flat back, the sway back and the syndrome of the shop girl's hip.

(4) Postural backache could be prevented if treatment were instituted in schools, before persons were due to enter certain trades or professions, and after pregancy. Its treatment is by exercises, preceded in certain cases by heat and massage.

(5) Steindler describes six common sites for pain producing lesions in the back and buttock.

(6) Treatment in these cases is made more difficult by the time that often elapses between onset of symptoms and institution of treatment and by the "functional top dressing" which develops in long-standing cases.

(7) Simple physical measures are likely to be successful in early cases but later manipulation, epidural and novocain injections are necessary to bring about cure.

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## ANOTHER DISEASE YIELDS TO PENICILLIN

A 5 year old child was cured of bilateral cavernous sinus thrombophlebitis (an infected clot in a large blood vessel) by the use of penicillin after treatment with heparin (to help dissolve the clot) and sulfathiazole had been without detectable benefit, Victor Goodhill, M.D., Los Angeles, reports in *The Journal of the American Medical Association* for May 6. Until recently reports of recovery from this disease were rare.

# Correspondence

## THE ILLINOIS HEART ASSOCIATION

A Charter has been granted to the Illinois Heart Association under the "General Not For Profit Corporation Act" of the State of Illinois.

At first meeting of the Association policy and future plans were discussed. The purposes for which the Association is organized are:

"To stimulate interest and encourage investigation in the social, medical, industrial and economic problems connected with heart disease, to develop cardiac clinics and other facilities for the diagnosis and treatment of heart disease and to correlate and standardize the work of various agencies interested in the prevention and relief of heart disease throughout the State of Illinois, and sponsor local societies."

The following were elected to the Board of Directors.

Dr. Emmet B. Bay, Chicago
Dr. Edward Cannady, Jr. East St. Louis
Dr. Gerald M. Cline, Bloomington
Dr. Herman Cole, Springfield
Dr. Howard Countryman, Rockford
Dr. Roland Cross, Springfield
Dr. Frank A. Deneen, Bloomington
Dr. Harry A. Durkin, Peoria
Dr. Lewis S. Ent, Cairo
Dr. N. C. Gilbert, Chicago
Dr. Richard F. Herndon, Springfield
Dr. John A. Ikemire, Palestine
Dr. Cecil M. Jack, Decatur
Dr. Darwin Kirby, Champaign
Dr. J. Roscoe Miller, Chicago
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Dr. Edgar M. Stevenson, Bloomington
Dr. Sidney Strauss, Chicago
Dr. Don C. Sutton, Chicago
Dr. George H. Vernon, Springfield
Dr. Italo Volini, Chicago
Dr. Edward H. Weld, Rockford
Dr. Lewis W. Woodruff, Joliet

The officers of the Association are:

| | |
|---|---|
| President: | Dr. Harry A. Durkin, Peoria |
| Vice-President: | Dr. Frank A. Deneen, Bloomington |
| Secretary: | Dr. Don C. Sutton, Chicago |
| Treasurer: | Dr. Luther J. Osgood, Waukegan |

## N. U. ALUMNI LUNCHEON

Northwestern University Medical Alumni will hold a luncheon during the American Medical Association convention, at the University Club of Chicago, 76 W. Monroe Street, on Thursday, June 15th, at 12:00 o'clock. Dr. J. Roscoe Miller, dean of Northwestern University Medical School, and Dr. Herman L. Kretschmer, president-elect of the American Medical Association, will be guests of honor on this occasion. Tickets for the luncheon may be secured at the registration desks at The Palmer House, the Stevens Hotel, or at the Medical Alumni Office, 303 E. Chicago Ave., Chicago 11, Illinois. Due to limited space, and present food conditions, reservations must be made in advance. The price of the luncheon will be $2.00.

## OLD COMMISSIONS WANTED

To the Editor:

The National Naval Medical Center of Bethesda, Maryland is endeavoring to collect for its archives a complete set of commissions issued to Naval medical officers, and signed by past Presidents of the United States.

There is a small nidus now at the Center and it is hoped to be able to build this up to completion. Through the Navy Department Library and the National Archives a few more have been located. I am wondering whether you would care to insert a small item in your "Journal" to this effect, with the idea that various

libraries or individuals may have in their possession such old commissions and would be willing to turn them over to the Center. If such are found and the owners are so generous, there could be no more fitting enshrinement of them than their use for this purpose.

Any assistance that you and the "Journal" can extend will be greatly appreciated by the Surgeon General.

Sincerely yours,

ROBERT C. RANSDELL
Commander, (MC), USNR
Division of Publications

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## A RESOLUTION OF APPRECIATION FOR THE WORK OF DR. JACOB C. KRAFFT

adopted by

THE ILLINOIS COMMISSION FOR HANDICAPPED CHILDREN

at its meeting on April 17, 1944.

WHEREAS: Dr. Jacob C. Krafft was actively interested in the problems of mentally handicapped children; and

WHEREAS: The efforts of Dr. Krafft played a most important part in the creation of the present Commission for Handicapped Children, with its responsibility for developing a more adequate program for educable mentally handicapped children in Illinois; and

WHEREAS: Much of the wealth of material which Dr. Krafft had gathered relating to mentally handicapped children has been presented to the Commission for Handicapped Children as an addition to its reference liberary through the courtesy of Mrs. Krafft;

THEREFORE BE IT RESOLVED: That the Illinois Commission for Handicapped Children makes known to Dr. Krafft's family its deep regret at the passing of Dr. Krafft; and

BE IT FURTHER RESOLVED: That the Illinois Commission for Handicapped Children expresses its appreciation for the untiring efforts of Dr. Krafft in the interests of educable mentally handicapped children; and

BE IT FURTHER RESOLVED: That the Illinois Commission for Handicapped Children hereby expresses to Mrs. Krafft its appreciation for the gift of Dr. Krafft's papers which she has made to it; and

BE IT FURTHER RESOLVED: That copies of this resolution be forwarded to members of the family of Dr. Krafft, to the Illinois State Medical Society, and to the American Academy of Pediatrics.

Mrs. Harry M. Mulberry
Chairman
Irving F. Pearson
Vice Chairman
Lawrence J. Linck
Executive Director

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## A RESOLUTION OF APPRECIATION FOR THE WORK OF DR. BEVERIDGE H. MOORE

adopted by

THE ILLINOIS COMMISSION FOR HANDICAPPED CHILDREN

at its meeting on April 17, 1944

WHEREAS: Dr. Beveridge H. Moore was an outstanding surgeon in the field of orthopedics; and

WHEREAS: Dr. Moore, in his capacity as chief surgeon at the Shriners' Hospital for Crippled Children and orthopedic surgeon at Cook County Hospital and Children's Memorial Hospital, did much to alleviate handicapping conditions among children; and

WHEREAS: Dr. Moore, by serving as a member of the Medical Advisory Committee of the Division of Services for Crippled Children of the University of Illinois gave invaluable assistance in developing and guiding a program of rehabilitation for crippled children in Illinois;

THEREFORE BE IT RESOLVED: That the Illinois Commission for Handicapped Children take cognizance of Dr. Moore's contributions to the welfare of handicapped children and express its appreciation there for: and

BE IT FURTHER RESOLVED: That the regret of the members of the Illinois Commission for Handicapped Children over Moore's death, be expressed to Dr. Moore's family, to the Medical Advisory Committee of the Division of Services for Crippled Children of the University of Illinois, and to the Illinois State Medical Society.

Mrs. Harry M. Mulberry
Chairman
Vice Chairman
Irving F. Pearson
Lawrence J. Linck
Executive Director

# Medicine's Role in the War Effort

## ARMY MEDICAL DEPARTMENT ESTABLISHES CIVIL PUBLIC HEALTH DIVISION

Major Gen. Norman T. Kirk, the Surgeon General of the Army, has announced the establishment of the Civil Public Health Division as a new organization with its principal function the formulation of policies and the development of plans for public health programs in occupied and liberated territories during the military phase of future operations.

The division, part of the Preventive Medicine Service under Brig. Gen. James S. Simmons, will be under the immediate direction of Col. Thomas B. Turner, M. C., who has just returned from an extensive tour of the European and Mediterranean theaters of operations, where such programs are now functioning or are in the planning stage.

The program already under way will integrate the public health activities of the Army overseas with that of other agencies in this field, including the U. S. Typhus Commission, the Navy, the U. S. Public Health Service, the United Nations Relief and Rehabilitation Administration and other national and international health organizations.

The Allied armies will be called on to assume a measure of responsibility for civilian public health in many areas, entailing supervision of or liaison with local public health officials and the provision of certain necessary medical supplies.

To accomplish this objective it will be necessary to commission from civil life a number of officers experienced in public health administration and in specialties such as nutrition, maternal and child health, public health engineering and laboratory technics.

Men who have had both general and special training in one or another of these special fields are being sought for such assignments in the Far Eastern area. They should not be over 50 years of age and should be physically qualified to perform at least limited service duties overseas. Previous military experience and knowledge of foreign languages is desirable but not essential.

The men selected will undergo a course of training at the School of Military Government, Charlottesville, Va., and thereafter in one of a number of civilian universities not yet designated. Instruction will include the theory and general principles of military government and liaison, and the language and background of certain Far Eastern areas. In addition provision will be made for training men in special phases of public health and certain medical specialties.

Further information may be obtained by addressing the Surgeon General, U. S. Army, Washington 25, D. C., attention Civil Public Health Division.

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## U. S. ARMY MOBILE UNITS SEEK BLOOD DONATIONS FROM ARMY UNITS IN ENGLAND

The United States Army Medical Corps has established mobile "bleeding teams" which will visit army units in England seeking donations to build up its blood bank reserve in preparation for invasion of western Europe. Col. Elliott C. Cutler, chief consultant in surgery in the European theater of operations, made the following comment on opening this traveling blood bank drive: "Whole blood and blood plasma are vitally important in a great military campaign if we are to save lives of wounded men. Our mobile units will enable us to reach soldiers who are happy to give blood to the bank but who have had no opportunity because facilities were unavailable." Only donors with O type blood are being accepted, since it is suitable for universal transfusion regardless of the patient's own blood type. The blood is placed in a special refrigerator, which holds 10 pints. In combat, refrigerator trucks will be employed to distribute the blood to advance hospitals.

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## WAR PRODUCTION BOARD EASES RESTRICTIONS OF THE MANUFACTURE AND SALE OF PHYSICAL THERAPY EQUIPMENT

The War Production Board recently announced that restrictions on the manufacture and sale of physical therapy equipment have been eased and that medical practitioners and hospitals may now buy certain types of equipment that formerly were restricted to these groups and to hospitals. In addition, three types of physical therapy equipment, generally approved by the medical profession for home use, may now be sold to

the public on prescription or order of a licensed medical practitioner. Action was taken on April 7 by amending order L-259 (physical therapy equipment). The order as issued in February 1943 placed strict control on production and distribution of this equipment and prohibited the manufacture of most types except for the armed services and lend-lease. Types that may now be manufactured are those most needed for general use. They are listed in schedule A of the order as follows: electric bakers, fever cabinets, galvanic generators, infra-red generators, low voltage generators, magnetic field generators, medical diathermy units, passive vascular exercise apparatus, surgical diathermy units, ultraviolet radiation equipment and whirlpool baths. These items may be sold to the armed services, to lend-lease, for licensed export orders, to hospitals and medical departments of industrial concerns, to medical practitioners and to distributors for delivery for these users.

Three types of equipment in schedule A (electric bakers, infra-red generators and ultraviolet radiation equipment) may be sold or rented to the public on written prescription of a medical practitioner licensed to use physical therapy equipment. Formerly the only types that could be made for civilian use (hospitals) were electric bakers, fever cabinets, major ultraviolet radiation equipment, passive vascular exercise apparatus and surgical diathermy units. Monthly scheduling reports are no longer required from manufacturers. However, quarterly reports of shipments of electric bakers, infra-red generators and ultraviolet radiation equipment to purchasers other than the armed services and lend-lease must be made by manufacturers. One combined dollar value figure is required. Distribution controls established by the order are designed to place the equipment that may now be manufactured in the hands of those having an urgent need for it the War Production Board said.

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## CADET NURSE CORPS

The United States Cadet Nurse Corps established by the Bolton Bill (HR 2664), approved June 15, 1943, sponsors the education, under government supervision, of young women for the nursing profession. By amendment to this act the federal services (Army, Navy, Veterans' Administration, Public Health Service and Indian Service) are permitted to accept in government hospitals the senior cadet nurses for the final six months period of their training.

The Navy Department has set up the policies and an educational program for those cadet nurses entering naval hospitals. Complete information relative to policies and plans on the navy program have been disseminated to accredited schools of nursing as well as to prospective students. In addition, requests have been sent to all state boards of nurse examiners requesting approval of the naval hospitals which have been designated to give this training. Thus far the only two states from which this approval has not been received are Florida and Texas. The first classes of nurse cadet personnel in the Navy began April 1, 1944 at the U. S. Naval hospitals at Seattle with 7 students and at Chelsea, Mass., with 20 students. U.S. naval hospitals at St. Albans, N.Y., and Oakland, Calif., will start classes May 1 with an enrolment of 25 students each. The naval hospitals at Portsmouth, Va., and San Diego, Calif., will start classes June 1.

The Navy will be the first of the federal services to put this program into practical operation. As a result of planning, the details connected with messing arrangement, housing and transportation are settled and ready to handle the entire group of entering students. It is expected that the number of students entering subsequent classes will have larger student complements.

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## ARMY WARNS AGAINST BOGUS AID FOR BLINDED SOLDIERS

The War Department recently issued a warning to the public to be on guard against fraudulent solicitation of funds based on pleas for aid to blinded soldiers. Despite the fact that the Army Medical Department has announced that thus far 73 men have suffered total blindness in this war, medical officers have reported circulation of misinformation and rumors that there are thousands of blind casualties. Several hoaxes already have been detected. In one instance in a West Coast city three blind men, none of whom ever had been in the military service, were represented in a newspaper story as veterans who had been blinded in action against the Japanese in the South Pacific. The blind men did not know that they were to be described as ex-soldiers and repudiated efforts to use them as pawns in the scheme. In two states, on two occasions, funds have been solicited on the strength of representations that the money collected would be used for training and care of the blind.

The Army Medical Department gives complete care to blind soldiers and retains them in hospitals until they have received the maximum benefit from their treatment, including reeducation and training for adjustment to civil life. Guide dogs are furnished to those who want them. Reputable guide dog agencies are cooperating in exposing efforts to hoax the public, and these legitimate organizations have furnished or have offered to furnish guide dogs for the nominal charge of one dollar or gratis to veterans needing them. The Surgeon General's Office estimated that only about 10 per cent of blinded servicemen will need or want guide dogs. Some blinded persons learn to use a cane skilfully and thus can get about less conspicuously and without the encumbrance of a dog. Medical officers have found that a blinded soldier should not, under any circumstances, have a dog until he has become as independent and self reliant as possible.

Blinded veterans are at present being cared for at the Valley Forge General Hospital, Phoenixville, Pa., and the Letterman General Hospital, San Francisco.

## LIEUT. HORACE M. GEZON AWARDED LEGION OF MERIT

Lieut. Horace M. Gezon, formerly of Grand Rapids, Mich., and now a naval reserve corps officer, was recently awarded the Legion of Merit for his work during the typhus epidemic in Naples. The citation said that Dr. Gezon "took vigorous and effective measures to treat the cause" of the plague and "on one occasion personally inoculated and deloused the entire ship's company of a merchant ship." Dr. Gezon graduated from the University of Chicago School of Medicine in 1940 and entered the service early in 1942.

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## OFFICE OF REHABILITATION ESTABLISHED AT THE BUREAU OF MEDICINE AND SURGERY

The Navy Department recently announced that the Surgeon General has authorized the establishment of an Office of Rehabilitation in the Bureau of Medicine and Surgery. This office will develop, place in operation and direct the program of rehabilitation for the Medical Department of the U. S. Navy. Rehabilitation, as it relates to this program, shall be interpreted as meaning all activities and services which may be required to supplement the ordinary or usual therapeutic procedures in order to achieve maximum adjustment of the individual patient either for further military services or for return to civil life with the least possible handicap from his disability. The Office of Rehabilitation shall serve in an advisory capacity in suggesting such procedures as may be expected to shorten the convalescent period and contribute to the rehabilitation of the patient.

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## CLINICAL CONFERENCE ON RECENT ADVANCES ON MEDICINE IN WARTIME

A twelve hour conference on the recent advances of medicine in wartime was held at the municipal theater in North Africa at Oran, which was attended by physicians, surgeons and dentists of the French, British and American armed forces. Col. Howard J. Hutter was responsible for organizing the conference. Lectures on the latest advancements of battlefront medication, surgery, sanitation, dentistry, therapeutics and control were presented. The convention was so large and wide in scope that it was necessary to utilize the Oran Conservatory of Music and the Lycee Lamoriciere buildings to house the many exhibitions and demonstrations.

The fundamental purpose of the conference was to establish a better understanding and spirit of liaison among the civilian, military and naval members of the medical profession who now occupy the Mediterranean base section, the department of Oran and the division of Oran to a furtherance of our allied effort, by a mutual exchange of ideas and methods in the latest and most approved advance in medicine, surgery, sanitation and preventive medicine.

## 173,000 CASUALTIES EVACUATED BY U. S. AIRCRAFT IN 1943

During 1943 more than 173,000 sick and wounded patients of United States and allied forces were evacuated by American military aircraft throughout the world. The total, based on reports from the Air Surgeon, Major Gen. David N. W. Grant, U. S. Army, to the commanding General of the Army Air Forces, Gen H. H. Arnold, U. S. Army, is divided as follows:

| | |
|---|---|
| Eleven air forces overseas | 161,541 |
| Eleven air transport command wings overseas | 8,687 |
| AAF, continental United States | 3,299 |
| | 173,527 |

These figures refer to sick and wounded patients admitted to a medical service and therefore include not only nonbattle casualties but also persons who have been air evacuated more than once from one hospital to another. For this reason these figures cannot be compared with totals appearing in battle casualty lists.

In all, 3,260 individuals were evacuated from theaters of operation into the United States aboard Air Transport Command airplanes. The totals of patients evacuated in the major theaters of operation are as follows: New Guinea, 70,808; Solomon Islands, 24,767, and Tunisia, Sicily and Italy 58,479.

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Promin, Diasone, Promizole and certain related compounds appear to possess in varying degree the ability to restrain development of experimentally induced tuberculosis in guinea pigs. It is recognized that this offers many contrasts with clinical tuberculosis in humans, even though the causative organism is the same.

Clinical and roentgenological data so far made available are as yet inadequate both quantitatively and qualitatively to permit, even tentatively, a positive evaluation of the curative effects of such drugs upon tuberculosis in human beings. Until controlled studies of adequate scope have been reported it is recommended that none of these drugs be used for treating tuberculous patients except under conditions which will add to our knowledge of their clinical action, and in the presence of adequate facilities to protect patients effectively from their potentially serious toxic effects. Patients and physicians must be reminded of the Federal regulations which prohibit distribution of a drug in the experimental phase of development to other than research institutions to which the material is assigned by the manufacturer for either laboratory or clinical investigation.

Any use of chemotherapeutic agents in the treatment of tuberculous patients must, therefore, be regarded as a purely clinical investigation. It must be emphasized that such use is not without hazard and that the roentgenological and clinical evidence reviewed gives no justification at this time for more than a critical interest in the value of these drugs in patients. Report of Comm. on Therapy, Amer. Trudeau Soc., Amer. Rev. of Tuber., April, 1944.

—NTA CLIP SHEET

# Original Articles

## PULMONARY EMBOLISM

### A study of the Relation of Occlusion of the Pulmonary Artery to Sudden Death.*[1]

MINAS JOANNIDES, M.D.

AND

ARTHUR L. HESSE, B.S.

CHICAGO

The subject of embolism has intrigued us for a number of years. The dramatic picture that develops in massive embolism, be it air embolism, or fat embolism, or thrombotic embolism, becomes very disturbing to the peace of mind of the surgeon and has a definite demoralizing effect. It becomes very awkward to a clinician to have an apparently happy and cheerful patient walk into his office or to the hospital, to have a simple procedure such as artificial pneumothorax, cleothorax, reduction of a fractured bone, or a minor perineal or pelvic operation and after this procedure is performed to have the patient become acutely ill and even die. Because these accidents do happen it behooves us to be on the lookout for early signs and symptoms of impending catastrophe in order to save the patient's life. The clinical syndromes resulting from various types of embolism require presence of mind, and preparedness for such accidents so that the proper treatment is carried out at the proper time. A delay even in minutes in supplying the patient with the proper medication and therapy means the difference between life and an acute fatality.

* From the Department of Surgery, College of Medicine, University of Illinois, Chicago.

1. The authors wish to thank Dr. Louis J. Miller and Mr. Russel Poulsen for their technical assistance in these experiments.

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At the outset we must emphasize the important fact that the body is very capable of handling without any symptoms smaller emboli and even showers of emboli, provided they are small enough to reach and go through the capillaries and provided they are not so numerous as to interfere with the normal function of the organ involved or to impede the cardio-vascular system.

The problems involved in air embolism[1] and fat embolism[2] have been discussed in previous papers. This presentation is concerned with the factors relating to thrombosis with embolism of the pulmonary artery and, or, its branches. Pulmonary embolism has been the subject of study for about 100 years when as far back as 1846 Virchow's[3] epoch making observations laid down the principles of blockage of vessels and these principles were applied to sudden changes in the pulmonary artery. Since then the subject has attracted the attention of many workers who studied the functional disturbances leading to death or recovery, and methods of prevention and therapy of such an accident.

The problem of pulmonary embolism resolves itself into the analysis of the factors that produce sudden death and in the attempt to eliminate these factors. It is obvious of course that a mere occlusion of a larger branch of the pulmonary artery does not necessarily cause death. If such were the case it would have been impossible for thoracic surgeons to successfully remove a lobe of the lung or the whole lung on one side without any consistent fatalities. Furthermore, the factors concerned with occlusion of the pulmonary artery are primarily quantitative and the clinical syndrome of acute pulmonary embolism develops when the lesser circulation has been severely interferred with. Haggart and

Walker[4] have reported that it requires an occlusion of over 64 per cent of the pulmonary arteries before sudden and acute symptoms develop. This observation may explain the fact that successful pneumonectomies are possible because in such a procedure only 50 per cent of the lesser circulation becomes disturbed.

The mechanism of death in massive pulmonary embolism has been the subject of great debate. In general two groups of thought are followed. The first group attempts to attribute all the phenomena as being neurogenic in origin. Among the recent proponents of this school one may include Leriche,[5] DeTakats[6] and others who propose such procedures as infiltration of the stellate ganglion with procain, and the use of papaverine or atropine as broncho and vaso dilators for the treatment of such cases. The second group, notably the Michael Reese Hospital group[7,8,9] have studied the problem extensively, both clinically and experimentally and have gathered evidence to prove that death associated with massive pulmonary embolism has to do with primarily circulatory phenomena associated with a major portion of the lesser circulation with its subsequent effects on the heart. They refer to these phenomena as a form of shock which is not neurogenic, hematogenic, vasogenic, or cardiogenic but has to do with a major obstruction in one portion of a double circuit which comprises the mammalian vascular system.

## EXPERIMENTS

In our work we have attempted to approach the subject from a surgical viewpoint;

1. By ligating the left pulmonary artery;
2. By ligating the left pulmonary artery and vein;
3. By ligating and completely severing the left pulmonary artery or its branches;
4. By high frequency coagulation of the left pulmonary artery;
5. By temporarily occluding one or more branches of the right pulmonary artery in previously pneumonectomized dogs who recovered completely from the effects of the resection of the left lung;
6. By introducing a coagulating substance (Monsel's solution of Ferric subsulphate) in order to produce various degrees of thrombosis and embolism.

The experiments were performed under sterile conditions on dogs anesthetized by using ¾ grains of morphine sulphate one and one half hours before the experiment and an intraperitoneal injection of pentobarbital sodium (nembutal) 20 milligrams per kilogram body weight one hour before the experiment. When the pleural cavity was opened artificial respiration was maintained by forcing intermittently air under positive pressure through the mouth and by obstructing the out-flow of compressed air, we caused a sufficient rise of intrapulmonic pressure to distend the lung. Positive pressure artificial respiration was maintained until the chest was closed completely.

In twenty animals the left pulmonary artery was occluded by ligature alone or by ligation and severing of the artery. No sudden death occurred in any of these animals. The animals were then cared for in individual cages and either died or were sacrificed at a period of 2 to 165 days after the operation. The animals to be sacrificed were given 20 to 30 cc of 6 percent pentothal sodium (nembutal) intravenously causing immediate death without any struggle which might modify our results. At autopsy we found in one group a massive infarct of the lung with tendency to grangrene of the lung tissue. In another group we found bronchopneumonic type of infarcts some of which were in the process of healing and others in the process of abscess formation. We encountered pulmonary abscesses varying from one to ten centimeters in diameter. In a third group of animals we encountered no appreciable pathology in the lung with the possible exception of a few pleuro-pulmonary adhesions. In this group we shall have to assume that a satisfactory collateral circulation from the bronchial artery must have come into play in order to carry on the normal circulation in the lung. Pleural effusion was quite common until we started to apply to the operative field 5 grams of sulfadiazine. Following this procedure our operative morbidity became nil and the postoperative effusions were eliminated.

In the second group of experiments both the left pulmonary artery and pulmonary vein were ligated in 13 animals. None of the animals in this series died suddenly as a result of the ligation. These animals were either killed or died

in 2 to 158 days after the experiment. The results noted were essentially similar to those in the first group.

In twenty out of these 33 animals in the first two groups a secondary thoracotamy was performed in from 5 to 155 days after the first operation and the left lung was resected. The technic used for pneumonectomy in these animals was the one worked out by us previously.[10] In none of these experiments did we encounter sudden death either during the operation or immediately following the operation. The animals were allowed to live from 3 to 155 days after the pneumonectomy.

In one experiment an attempt was made to produce coagulation of the left pulmonary artery by applying a needle electrode with a high frequency current. The vessel was coagulated completely without any immediate fatality. This finding does not substantiate the findings of Cullen and Ravenstone[11] who reported three instances in which the patients died suddenly when the hilum of the lung was ligated or cut with the electric cautery. We have studied this problem previously in connection with a number of experiments that we carried out to study the response of the lung to high frequency currents. At that time we tried to determine the safety factors involved during severing of pleuro-pulmonary adhesions in intrapleural pneumonolysis. Then as well as in this experiment we found that there was no response other than the coagulating or incising effect when the high frequency current was applied to the lung, or the chest wall, or the hilum.

An interesting observation worth noting was that when the isolated phrenic nerve came in contact with the high frequency cutting current, there was no effect on the nerve unless the nerve was in close contact with other tissues in the mediastinum. Then and only then the cutting current would cut the nerve promptly. Sudden death does occur with the use of a high frequency current but it only happens when the electrode comes in contact with the pericardium. Under such conditions we invariably noticed an acute dilatation of the heart.

Being certain then that ligation of the left pulmonary artery, and also both pulmonary artery and vein on one side did not produce sudden death we began to feel that the clinical



Figure 1. — Dog's heart showing acute dilation of right ventricle and auricle following massive occlusion of the pulmonary artery.

picture associated with pulmonary embolism must be a quantitative phenomenon of occlusion and had to do with the disturbance of the pulmonary circulation.[7,8,9] To ascertain this fact we took five dogs in whom there was complete recovery from the pneumonectomy done three to six months previously and inserted temporary ligatures to the various branches of the right pulmonary artery. The ligatures were passed through a fine rubber tube and left outside of the chest wall. After the animal's chest was completely closed and the animal recovered from the effects of the thoracotomy, a tug was exerted on the ligature with the rubber tube acting as a tourniquet. In all five animals there was a sudden death preceded by a short period of increased respiration with prompt stopping of the heart. The interval between the occlusion of the vessel and the complete cessation of cardiac activity studied electrocardiographically varied from 3 to 20 minutes. In all these experiments the dogs died after only a single tug over the ligature without recovery even though the liga-

ture was released. Artificial respiration and cardiao-respiratory stimulation even with large doses of coramine were ineffective. In all these animals the heart showed a characteristic picture (figure 1), namely an acute dilatation of the right ventricle and auricle and an apparent contraction of the left ventricle and auricle. Katz[12] explains this phenomenon on the basis of blockage of the lesser circulation causing a distention of the right ventricle and auricle. That the phenomenon of sudden death is quantitative was further demonstrated by the fact that an animal with one lung tolerates well the occlusion of one branch of the right pulmonary artery thus leaving the blood supply of the remaining two lobes to maintain the circulation. When, however, two branches were occluded the inevitable result was a prompt and positive death of the animal.

The problem of sudden death due to pulmonary vessel occlusion was solved satisfactorily in our own minds. We have found that mechanical or surgical occlusion of the left pulmonary circuit and one of the lobar branches of the right pulmonary artery is well tolerated. Beyond this point massive occlusion of the pulmonary vessels is always associated with death of the animal. However, are the factors involved the same when the massive occlusion of the pulmonary vessels is associated with thrombosis causing pulmonary embolism? Previous experimental work[7, 13, 14, 15, 16] with the use of thrombi and other emboli to occlude the pulmonary arteries has been shown as the cause of death. The explanation of the factors causing death has been a matter of dispute. Five views have been prevalent.

1. Asphyxiation as the cause of death has been emphasized by Haggart and Walker[4] and by Binger and his coworkers[13].
2. Acute right heart failure has been considered by Haggart and Walker[4], White[17], and Villaret and his coworkers[14].
3. Reflex standstill of the heart, reflex inhibition of the respiratory center or reflex vasomotor shock have also been considered[14].
4. Obstruction of the blood flow to the left heart with a consequent reduction in its output has been proposed as a factor[4].
5. The consideration of the circulation in the mammals as a double circuit with a major obstruction of one circuit has also been proposed and is considered as a form of shock[7].

In the next series of experiments various strengths of Monsel's solution of Ferric subsulphate were used intravenously. Thirty separate injections were made in sixteen animals. One animal received as many as seven separate injections at weekly intervals. In three experiments 2cc of the full strength solution was injected into the femoral vein. It was followed by prompt thrombosis in the femoral vein to the extent of even making it difficult to inject the last few drops of the solution. The animals died promptly and at autopsy we discovered a massive thrombosis of the iliac veins, the vena cava, the mesenteric veins, the right auricle and ventricle, and the pulmonary arteries. It was then obvious that further study of this problem required greater dilutions of the coagulant. In the next three experiments the injections were made with one to a thousand (1-1000) dilution of the Monsel's solution in normal saline. The injection was continued in each case until the animal died. It was found that dogs tolerate well up to as much as 20cc per pound of body weight of 1-1000 solution of the coagulant. When this amount is given, it is generally followed by hyperpnea, frothing from the mouth, cardiac arrhythmia and death. The animals were found to tolerate well also up to 10 cc per pound of body weight of 1-500 solution of the coagulant in normal saline. Greater concentrations of the coagulant such as 1-250 solution or 1-100 solution were not tolerated and safe doses could not be determined. It is obvious the phenomena of thrombosis and embolism with sudden death are quantitative and concern themselves with the disturbances produced by the occlusion of the pulmonary vessels and the coronaries. The animal can tolerate thrombosis and embolism up to a certain maximum as we have found out in one experiment in which the animal received seven (7) weekly gradually increasing doses of the coagulant and tolerated it very well. The protocol in this experiment may be of interest.

11-9-42. Female dog weighing 18.5 pounds. Analgesia produced by preliminary injection of one (1) grain of morphine subcutaneously. A 21 gauge needle was inserted into the popliteal vein and 150 cc of 1-500 solution of Monsel's

in normal saline was injected in 5 minutes. Some increase in the depth of respiration was noted. The pulse became irregular and on capillaroscopic examination of the skin small emboli were noted in the capillaries. Coagulation time done by the Howell method was 6 minutes before and 3 minutes after the experiment. The animal appeared quite comfortable and was sent back to its cage.

11-16-42. Dog apparently normal. Pulse rapid but regular. Weight 18 pounds. A 21 gauge needle was inserted into the same popliteae vein as in last week's experiment, and 150 cc of 1-500 solution of Ferric subsulphate in normal saline was injected in 5 minutes. Hyperpnea and irregular pulse rate were again encountered but no fatality resulted. Coagulation time was 5 minutes before and 3 minutes after the injection.

11-23-42. Dog is now weighing 20 pounds. Right popliteal vein is sclerosed. Left popliteal vein was used. Coagulation time 1 minute before, 30 seconds after the injection. One hundred and fifty (150) cc of 1-500 solution of Monsel in normal saline was given. Hyperpnea developed when 100 cc were injected but the animal tolerated 150 cc of the coagulant.

11-30-42. Dog's weight now 21 pounds. Heart rapid but regular. No preliminary medication. Coagulation time 4 minutes before and 30 seconds after the injection of 160 cc of Ferric subsulphate 1-500 solution in normal saline. Hyperpnea developed when 100 cc was given and a reduction followed in the pulse rate from 120 beats per minute to 70 beats per minute. Definite arrhythmia — no fatality.

12-7-42. Weight now 22 pounds. Heart irregular and slow (70 beats per minute). Coagulation time 5 minutes before and 7 minutes after the injection. No apparent symptoms developed although a total of 400 cc of 1-500 solution of Monsel in normal saline was injected in 10 minutes. Heart rate now became rapid and arrhythmia disappeared. Because of the increase in the coagulation time and the tolerance to an amount over and above the usual safe dose, it must be assumed that changes have occurred in the coagulation mechanism of the blood to take care of the added amount of the coagulant introduced into the blood stream.

12-14-42. Weight 21.5 pounds. The veins of both hind legs are now sclerosed and injection of 200 cc of 1-500 Monsel in normal saline was carried out using a superficial vein in the fore legs. This was tolerated well. Injection was stopped because dog struggled and needle slipped from vein.

1-4-43. Weight 23 pounds. Coagulation time 3 minutes before and 10 minutes after injection of 280 cc of 1-250 solution of Monsel in normal saline. In spite of the double strength and in spite of the hyperpnea developed after 200 cc were injected and in spite of the gallop rhythm the animal tolerated the larger dose of the coagulant. On capillaroscopic study of the skin, emboli were noticeable in the skin capillaries.

1-6-43. Dog found dead in cage. Autopsy revealed bloody frothing from mouth and nose. Pulmonary edema and multiple hemorrhages in both lungs with consolidation of both lower lobes. Left ventricle contracted, right ventricle dilated, no clots in coronaries or pulmonary arteries, or vena cava. Thrombosis of superficial veins of all extremities. This experiment shows that tolerance may develop in an animal so that larger than maximum safe doses may be given up to a certain limit of concentration. Undoubtedly the coagulating mechanism of the blood was so disturbed that fatal hemorrhage and acute edema of the lung resulted.

Coramine (pyridine-beta carboxylic acid-diethyl amid) has a definitely protective action in an animal in which tolerance was not built up. Thus an animal weighing 17 pounds could tolerate 200 cc of 1-500 solution of Monsel, and each successive week was able to receive without mishap as much as 200 cc, 250 cc, and 300 cc respectively. On the following week as much as 1000 cc was tolerated with the coagulation time changing from 3 minutes before the injection to 30 minutes after the injection. The animal died during the night and at autopsy we found bloody nasal secretions in the nose and pharynx, bilateral hemorrhagic pleural effusion and peritoneal effusion, massive edema of the lungs, and fluid blood in the heart chambers and both the arterial and venous systems. No thrombi could be found. This animal must have died either from an acute plethora alone or in combination with complete failure of the coagulating

mechanism of the blood causing pulmonary edema and hemorrhagic effusion in the pleural and peritoneal cavities.

## DISCUSSION

Pulmonary artery occlusion produced either surgically or mechanically, or by thrombosis and embolism is well tolerated both clinically and experimentally up to a certain maximum point. Occlusion of 50 percent of the pulmonary circulation is sufficiently tolerated to warrant the possibility of doing pneumonectomies or bilateral lobectomies with comparative impunity and as long as the lesser circulation is not obstructed up to two thirds of its total no untoward results should be expected. In thrombosis and embolism the picture becomes more complex and depends upon the location of the embolus. It may cause occlusion or interference of the blood supply of any organ and result in infarction. It may attack the medullary centers and cause sudden death. It may occlude a sufficient amount of the coronary blood supply to cause a fatal infarction of the myocardium. It may occlude a sufficient amount of the pulmonary artery to cause blocking of the lesser circulation with resulting right heart failure and eventually complete heart failure.

It is obvious therefore, that the most important factor in thrombosis and embolism is prophylaxis in order to avoid the possibility of the development of thrombosis and embolism; early recognition of its presence, and proper care of the patient when massive embolism results. The incidence of fatal embolism has been set from 0.09 percent to 14.52 percent of autopsy material[18]. Rosenthal[19] in a study of autopsy material of 1000 cases sets the figure to 7.8 percent. That many more cases of non fatal emboli occur is obvious from the experience of many clinicians who are called upon to treat infarcts of all kinds and especially of the lungs. Cases of fatal massive pulmonary embolism may occur suddenly and acutely without any previous clinical evidence of the presence of thrombosis. Churchill[20] classifies the patients with massive pulmonary embolism in two large groups. In the first group he includes all cases in which the thrombus is large enough to completely block the outflow from the right heart to cause an immediate but not instantaneous death. In the second group he includes the cases in which there is a partial obstruction of the pulmonary artery resulting in delayed death due to reduced effective blood volume. It is this case that may respond to surgical intervention by removing the clot with the use of the Trendelenburg technic[21] as modified by Meyer,[22] and Nyström.[23] In order to try and assist the patient one must be on the alert for the characteristic clinical findings in massive pulmonary embolism. Quoting Giertz and Crafoord[24] Churchill[20] enumerates the clinical picture in 27 patients in 23 of whom the diagnosis was made antemortem. We quote Churchill verbatim. "The symptoms observed were in order of frequency as follows: sudden onset of symptoms without any warning; high, soft, imperceptible pulse; marked pallor; unconsciousness; slight cyanosis; craving for air; dyspnoea; altered respiration, superficial or deep; snatching or groaning; feeling of oppression, dread, anxiety, restlessness; pain or stitch in the chest, usually over the pericardium; 'shock;' cold perspiration; pulsations in the veins in the neck; waving of arms about, wanting to get up; violent vomiting; strabismus; dilated pupils, giddiness, and yawning occasionally occur." The symptomatology is summarized as follows: "In most instances it (massive pulmonary embolism) comes like a bolt from the blue with typical symptoms of which the most frequent are intensive pallor, loss of pulse and consciousness. Common symptoms are also oppression, craving for air and a mild cyanosis with a typical venous pulsation above the clavicles." In the acute cases death may ensue even before any assistance can be given. In the less acute cases sudden pallor, thready pulse, cold hands and sweating, dilated pupils, chest pain, dyspnoea, coma, and Cheyne- Stokes respirations should establish the diagnosis of massive pulmonary embolism.[18] The electrocardiogram may be of some assistance but the picture tends to resemble that of posterior wall and in some cases anterior wall myocardial infarction.[25]

Massive pulmonary embolism should be differentiated from shock resulting from hemorrhage, coronary occlusion, massive collapse of the lung, acute spontaneous pneumothorax, and uremia. The diagnosis from coronary occlusion is made[18] in the absence of pain, the absence of previous concurrent "indigestion," and the presence of cyanosis and engorgement of the neck veins. The development of acute "cor pulmonale" in cases of delayed death may be of assis-

tance. It is evidenced by increased prominence and pulsation noted by inspection and palpation in the region of the second and third intercostal spaces just to the left of the sternum; a friction rub in this region; gallop rhythm, diastolic in time, heard along the left sternal border; distention and increased pulsation of the jugular veins and cyanosis as described by White.[26, 27] The electrocardiogram may also assist when it shows evidence of right ventricular preponderance with the tall P waves seen in leads 2 and 3, a tiny inverted QRS complex of the S type in lead 1 with occasional similar changes in lead 2 and inverted T wave in lead 3 with the S-T segment depressed. Massive collapse of the lung may be recognized by the fact that it generally occurs within the first day or two after operation, and the dyspnoea is a much more prominent feature relatively and is out of proportion to the degree of general shock found in pulmonary embolism. Spontaneous pneumothorax is usually associated with still greater respiratory distress than is found in embolism and the physical signs in the chest are unilateral. An x-ray film of the chest will definitely help to make the diagnosis.

Because of the seriousness and the hazards associated with this condition it becomes necessary to muster every possible prophylactic measure to prevent the formation of thrombi, and when formed, to prevent the mobilization of the clot. Therefore, avoiding of trauma during operation, rolling the patient from side to side as soon as the patient comes out of the anesthetic, moving the extremities to prevent stagnation of the blood in the blood vessels especially just below Paupart's ligament are but a few of the procedures that should be kept in mind. When there is a clinical evidence of thrombosis as evidenced by pain in the groin with or without swelling in the lower extremities, it is necessary to prevent any activity long enough to allow the clot to organize, and to consider embolectomy or ligation of the femoral vein. Conservative measures may help such as the use of oxygen inhalations to prevent anoxia. The use of papaverine in doses of ½ grain intravenously or atropine in doses of 1/150 grains may assist in dislodging a clot from the larger branches to the smaller branches by vaso dilation and prevent a calamity. The use of coramine as a cardio-respiratory stimulant may be of some value. Venesection may be tried in cases in which the obstruction in the lesser circulation is so great that it produces distention of the pulmonary artery. Churchill[20] warns against the indiscriminate use of venesection since it may reduce the high head of pressure in the right ventricle, that is acting to force the blood past the obstruction. In cases of delayed death embolectomy by the Trendelenburg technic and its modifications should be kept in mind provided a competent thoracic surgeon is available at the time. Even though so far no satisfactory embolectomies were reported in this country the small number of recoveries reported by continental surgeons should be a stimulus to try to save a patient otherwise condemned to die.

## SUMMARY

1. Experimental work done from a surgical viewpoint has shown that the body can tolerate an occlusion of the pulmonary circulation up to two thirds of its total volume.

2. Occlusion of the pulmonary artery by thrombosis and embolism is found to have also a quantitative factor. Experimentally dogs tolerate up to 20 cc of 1 to 1000 dilution of Monsel's solution in normal saline and up to 10 cc of 1 to 500 dilution per pound body weight.

3. An apparent tolerance was observed in dogs after repeated injections of the coagulant and also when it is preceded by the injection of coramine (1½ cc) two to five minutes before operation.

4. The blood being a colloid substance necessarily follows the laws of physical chemistry. In precipitation of colloid particles the size of the particle depends on the rate of nucleation. If the rate of nucleation of the thrombogenic elements in the blood stream that pass through the capillaries is accelerated sufficiently, thrombosis would necessarily result in the systemic vascular tree. Such most likely is the course of events which results in the presence of thrombi in the systemic circulation after the thrombogenic substances have passed through the capillaries of the lung and reach the left heart and the arterial system, including the coronary arteries.

5. Tolerance to the presence of coagulants in the blood stream coupled with increase in the coagulation time of the blood in animals who were made to tolerate the injection of coagulants suggest the possibility of preventing hazards re-

sulting from massive embolism if and when ways and means are devised to properly control the coagulating mechanism of the blood.

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DISCUSSION

Dr. Ralph Bettman, Chicago: — Gentlemen, I will have no difficulty in limiting my discussion to five minutes, in fact, it will be much easier to limit it to two minutes. The discussant is supposed to be up here on the rostrum to clarify the paper, but when the paper is as clear as this one, clarification is difficult and I am afraid if I were to talk my entire five minutes I would do just the opposite.

There is just this one point that I wish to make: there still is some difficulty about terminology. To many of the writers pulmonary embolism means two things. True embolism in the pulmonary artery such as Dr. Joannides discussed is the right definition of the term. However, unfortunately, the bronchial embolism in which a mass of thick material blood clot or pus is aspirated into a bronchus, causing a collapse of the lung is often misconstrued as a pulmonary embolism. In order to be able to think more definitely on the subject, I think we should be very careful and have pulmonary embolism stand for what it should be: an embolism of the pulmonary artery.

Another thing of importance is that a pulmonary embolism must deal with a large portion of the blood supply. In order to cause immediate death it cannot only include one artery but must be a riding embolism, that is, occluding both sides.

The last point I will make is this: We as yet have no criteria which will tell us which patient is going to die from the pulmonary embolism and which is the case that is going to get well. That is one of the reasons I am not going to stress too much surgery for pulmonary embolism. I, myself, have had two patients go up to the operating room to try to remove a pulmonary embolus. One of the patients was so much better when he came up to the operating room that we decided not to operate and sent him down. Another patient I saw an hour-and-a-half after the embolism and I said, "This patient we won't operate," and I went out to tell the people that and was called back — the patient had died. Until we can determine more definitely which is the case that has the riding embolism and which does not have the riding embolism I am afraid we shall have to refrain from operation. The neurogenic factor is of tremendous importance in producing the spasm which exaggerate the mechanical changes of pulmonary embolism. Thank you for your kind attention.

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Ne'er yet by force was freedom overcome. — *James Thompson.*

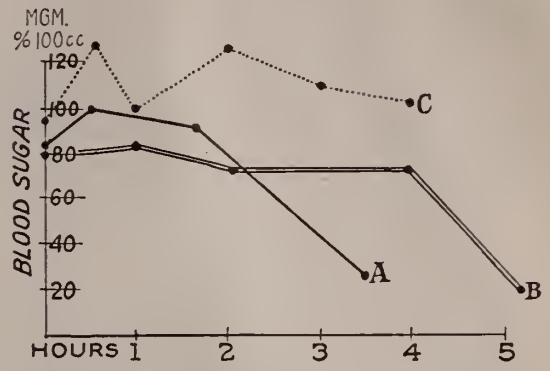
# NERVOUS AND MENTAL MANIFESTATIONS OBSERVED IN SPONTANEOUS HYPOGLYCAEMIA

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ELGIN

Spontaneous Hypoglycaemia was initally described in 1924 by Harris[1] and attributed to an over production of insulin by either tumor or hyperplastic islet cell tissue of the pancreas. It was not until 1927, however, that hyperinsulinism was firmly established by Wilder[2] as a definite clinical entity. Since then less than 100 cases have been described in the literature, although in the opinion of many internists many more cases must have existed and remained unrecognized as such. As a further development, it soon became apparent that many more cases of spontaneous hypoglycaemia could be attributed to extra-pancreatic factors, and the concept of so-called "functional" hypoglycaemia was admitted to the literature. Later investigations revealed the presence of liver factor and also of central autonomic influence in precipitating symptoms of hypoglycaemia. Whether the non-organic hypoglycaemic states are truly autonomic in character or are manifestations of true borderline pancreatic-liver disturbance will depend upon the further accumulation of physiological and pyschological data in such cases. Recognition of various types of spontaneous hypoglycaemia has risen out of valuable studies in this field. Functional and recurrent hypoglycaemic symptoms following carbohydrate meals is common, although little recognized and worthy of attention because of the problems of emotional instability and other neurotic manifestations, even when not severe enough to simulate epilepsy or an obvious equivalent.

Conn[3] reports amelioration of symptoms by the administration of low carbohydrate, high protein diets with subsequent return to normal of the glucose tolerance curve; the implication being that such cases are borderline "organic" metabolic disturbances, the diet rendering glucose available through a more gradual absorption of converted protein, in this manner avoiding the rapid rise of blood sugar and the exaggerated secondary fall following pure carbohydrate ingestion. Yet, on the other hand, Rennie and Howard[4] have succeeded in producing complete amelioration of hypoglycaemic symptoms by psychiatric treatment directed to the underlying personality disorder without consequent stabilization of carbohydrate metabolism, and return of glucose tolerance to normal.

CHART I




A] AFTER 100 GM. GLUCOSE (ORAL)
B] AFTER HIGH COH. MEAL
C] AFTER LOW COH. MEAL

That the symptoms noted may be a part of, or simulate, a great many nervous and mental disorders is quite well known and has been adequately reviewed by Rynearson and Moersch[5]. The behavior noted may run the gamut of psychologic symptomatology from ordinary nervous-tension-states to clinical epilepsy.

Romano[6] has given further emphasis to this in his studies upon the relationship of cerebral anoxia and the resultant motor, intellectual and emotional impairment, and draws attention to the fact that errors in diagnosis occur frequently in the study of neurotic personality disorders; that the principle error lies in the "improper exclusion of positive data related to physical disease in psychosis".

Few cases are recorded of chronic long standing disorders of the personality related to hypoglycaemic states. Of these, Romano has recently reviewed one case that had experienced attacks of confusion associated with bizarre behavior over a five year period.

In the studies to follow, an example of each of three recognized varieties of hypoglycaemia is presented.

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Presented before the Physicians' Association, Department of Public Welfare, State of Illinois, 103rd Annual Meeting of the Illinois State Medical Society, Chicago, May 18, 1943.

We have recently had the opportunity to observe and treat a case that quite properly fits into the classic "organic" spontaneous hypoglycaemia. To this case has been added two others of more recent date of observation that would seem to belong to the functional group, albeit the participation of a pituitary factor in one probably obtains.

CASE REPORTS

*CASE* 1: L. K.:, Female, age 43, married for the second time, has two sons by a former marriage. Familial history was not remarkable for nervous, mental or medical disorders; patient was the third eldest of 4 siblings, all of whom are in good health. Birth and early development were regarded as being normal; completed 8th grade, later employed variably as waitress and beauty operator. Patient divorced first husband in 1922, who died recently of cancer and locomotor ataxia. Patient herself was unaware of the existence of syphilitic infection prior to 1938, at which time she developed her first spells and for the next two years received antiluetic therapy; the remainder of the family have been consistently sero-negative. Her pre-psychotic personality was considered to be of normal, extrovert make-up, jolly, talkative, fond of social contact; had made a splendid domestic and marital adjustment and able to manage her financial matters properly. Nothing of further value is available from the anamnesis.

*Onset of mental symptoms*: As described by the informant, in 1938 the patient developed "spells", became weak in the knees, acted as if she were intoxicated, staggered and fell, acted silly and giddy, appeared dazed and talked to herself in a repetitive manner. These spells would last several hours, following which she seemed to have awareness of what had occurred, and complained of being tired and nervous. For a period of six months later in 1938 she was completely well, displayed no peculiarities in personality and had no further spells. The latter soon recurred however, became more frequent, more intense and prolonged, and for the next two years occurred daily. In the morning the patient was found cold, semi-conscious, was confused, twisted and jerked about. As time went on these spells would endure almost an entire day, mumbled incoherently, eyes remained open but glassy, teeth were clenched and the tongue often bitten.

For four months prior to admission to the Elgin State Hospital in February 1941, she seemed to be in a continuous daze, unable to care for herself, became rigid throughout, incontinent, aphasic, disoriented and hopelessly confused; 3 days prior to admission she was said to have had a choking spell and remained unconscious during these three days. These symptoms were attributed by her family physician to syphilis, although at no time had she received any form of specific therapy directed to the central nervous system. On another occasion a diagnosis of schizophrenia with very poor prognosis had been made.

*Course*: The patient was admitted to the Elgin State Hospital from the Psychopathic Hospital with a provisional diagnosis of Taboparesis with far advanced deterioration in all the intellectual faculties, and the recommendation for fever therapy.

Initial examination revealed a weight of 140 lbs.; height 5 ft. 3 in., severe pyorrhea; distant heart tones; blood pressure 112/80; vision 10/40 bilaterally; patient was too uncooperative for proper evaluation of specific modalities in the sensory sphere; muscular coordination was good, slight sway on Romberg; pupils were fixed 1 cm., outline somewhat irregular. Speech was dysarthric, and there was a coarse tongue tremor. Knee and ankle jerks absent; abdominal plantar, pharyngeal and corneal reflexes 1 plus; biceps and triceps 1 plus. Blood serology revealed a 4 plus Kahn; Hemoglobin 82%; urine was consistently negative. Spinal examination revealed 1 cell; negative Ross-Jones, Wasserman and Pandy. 0000000000 Colloid Gold Sol Curve; E.K.G. normal; proctoscopic examination negative; a blood fasting sugar of 47.5 and N.P.N. of 30.2 (Folin method, normal glucose range of 80-100 mgm. per cent.)

Upon admission to the acute hospital service it was soon apparent that the patient was markedly ataxic, showed many features of depression, was self accusatory and self-recriminating, wished to be left alone, preferring to die. When stimulated or provoked, displayed exaggerated irritability and became negativistic. When allowed to be left alone, showed an improvement in behavior. With forced feeding there was soon noted a remarkable transformation of the personality, was able to walk without ataxia, became rational and spoke coherently, without gross evidence of dysarthia. This improvement was consistently noted following oral administration of glucose-containing foods or intravenous glucose; however, it became necessary to administer glucose every three or four hours day and night to prevent relapse into a stupor; 5 minims of adrenalin produced similar transient recovery. Blood sugar determinations varied from 35-52; an experimental 12 hour fast produced a gradual reduction in blood sugar, the final reading too low to be estimated.

The psychiatric staff diagnosis made was Psychosis with Somatic disease, systemic syphilis; the pre-operative clinical diagnosis made at this time was Spontaneous Hypoglycaemia, pancreatic adenoma.

Repeated Pre-operative Electroencephalograms revealed psychomotor attacks, and many slow waves; prover evaluation however could not be made by the electroencephalographic interpreter because of the existence of too many artifacts. An electroencephalogram performed one year subsequent to surgery revealed the presence of very low amplitude (10 microvolts) waves, but of essentially regular rhythm.

On 6/3/1941 exploratory laparotomy was performed by Dr. Kousky, revealing an adenoma of the pancreas, 26 millimeters in diameter, easily shelled

out. The pathologic report given by Dr. Eric Liebert* is the following:

"Small tumor, cherry size, soft consistency, grayish white upon cut section; the tumor has a homogeneous appearance, no essential structure is visible grossly.

Microscopic: Tumor consists of glandular tissue, markedly proliferated, engorged capillaries, the stroma is scanty. Several rows of epithilial cells line the glandular structures, but there is no definite evidence of malignancy.

Diagnosis: Circumscribed adenoma of the pancreas."

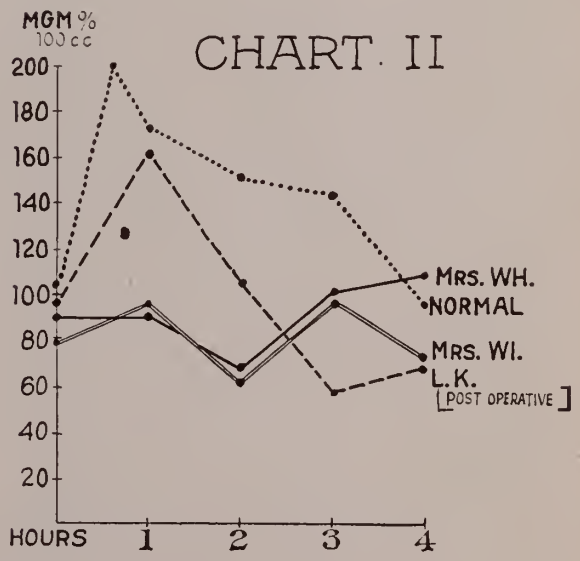
The post-operative surgical course was uneventful except for a transient pancreatic fistula that quickly healed. For the first four days post-operative, blood sugars ranged (in decreasing manner) from 307.8 to 135, due, undoubtedly both to the administration of parenteral glucose (covered with insulin) and to the acute operative metabolic upheaval. For the next entire week, sugars ranged from 88 to 135 and from then on became firmly stablilized at 87 to 91.0. Coincident with the blood levels was noted corresponding rapid improvement in the patient; she became quiet, cooperative, pleasant, sociably inclined, responded to all questions coherently and relevantly and referred to her earlier experiences as terrifying ones; vaguely recalls having heard strange voices and having had bizarre visual hallucinatory experiences that she was now not able to describe.

At staff presentation two months subsequent to surgery and upon occasional social service examinations, some residual organic levelling seemed apparent — showing some rigidity in posture and some degree of confusion upon provocation. Dysarthria had disappeared in the coarse of two months. Patient was discharged as much improved 8/10/41 (two months following surgery.)

****Subsequent Course*: The patient was returned 8/25/42 for re-examination (15 months post-operative) and again 2/4/43 (20 months post-operative). Her domestic and social adjustments are said to be excellent and no defect is apparent to her family. Upon examination patient is immaculately dressed, in excellent contact, properly oriented, smiles affably and in the broadest aspects shows little or no evidence of intellectual deterioration or psychosis; slight dysarthria remains upon test phrasing (is wearing poorly fitting dental plates.) Insight is excellent, patient can recall all events remarkably well, and was able to name all medical and nursing personnel and numerous patients that had been on the service 15 and 20 months previously. Since her release and upon our advice, patient has continued to receive antileutic bismuth and mercury treatment. What seemed most amazing upon physical examination is that the pupils now responded very quickly to light and there was no evidence of ataxia; reflexes were sluggish but present. It is regrettable indeed that we neglected to perform standard psychological deterioration tests. A glucose tolerance test at this time revealed the following (15 months post-operative).

| | | |
|---|---|---|
| Fasting sugar | 96.1 | (N.P.N. 30.6) |
| 1st hour | 160.0 | |
| 2nd hour | 102.7 | |
| 3rd hour | 57.0 | |
| 4th hour | 63.4 | |
| 5th hour | 80.0 | (see chart 2) |

*CASE 2: — Mrs. W. Employee*: Age 38 — has been regularly performing excellent duty upon an active therapy ward for 12 years, always in excellent health. In recent months (4-6) she has gained some weight and developed distressing symptoms variously labelled as neurasthenia, to wit: work upon the ward was becoming increasingly difficult, attended by a degree of fatigue and restlessness incommensurate with her work efficiency in the past. She became irritable, more readily provoked by the conduct of the patients to a measure incomprehensible to her. As the hours went by on duty, restlessness became progressively worse, leading to apprehensive anxiety; in desperation she considered the request to be transferred to a chronic service. Briefly, a woman of Amazon strength, and of proven stoic stability in the management of disturbed patients, was so seriously distressed as to contemplate resignation from the service. More interesting was the fact that working late duty was worse than early duty. (See chart 2).




She was placed on a low carbohydrate, moderate fat, high protein diet, with rapid and complete amelioration of symptoms. A laparotomy for pelvic disorder was performed 2 months later and was unattended by any untoward symptoms. She has continued to remain in excellent health for 5 months.

*Clinical Director of Elgin State Hospital.

**When again seen March 1944 (33 months postoperative), the patient was in excellent health from all standpoints, and now is employed as an inspector of fine parts in a defense factory.

*CASE 3. Mrs. W. H.*: An obese woman of pluriglandular endocrine habitus, complained of seriously debilitating symptoms for 5 years, during which time she had been under the care of many physicians and received every variety of glandular substance with variable results. For many years patient would awaken in the morning in a lethargic, retarded state; in her own words, "I would be so stupid, unable to concentrate for 1 hour after awakening and would return to normal alertness only after 8-10 cups of sweetened coffee. I got so that I found it necessary to set the alarm clock one hour earlier in order to be certain I could arrive at work in a respectable state of alertness." At various times, but not regularly, but usually at 11:00 A.M. and later afternoon, she would suddenly become apprehensive, extremely restless, developed heart palpitation, and would dash over to the hospital requesting an ampoule of calcium which seemed to give her temporary relief. The attacks occurred once weekly or so. When seen prior to the injection, patient was flushed, perspiring, anxious and had a tachycardia. (See chart 2)

A low carbohydrate, high protein, moderate fat diet has resulted in amelioration of all symptoms, although pituitary extract seems to be of auxiliary benefit. B.M.R. — 8. Entire condition aggravated by thyroid substance. Fasting blood sugar levels after starvation remains at basal 80-90.

## COMMENTS

Up to very recently the classic treatment of severe spontaneous hypoglycaemia was the administration of glucose, the method of administration being dependent upon the severity of symptoms. Yet cases were known to respond poorly to intravenous glucose or epinephrin, so that surgery of the pancreas became necessary, and even a few of these cases stubbornly refused to respond to therapy. Physiologists and clinicians soon recognized this paradoxical effect of glucose in further increasing sugar tolerance; glucose as such, therefore, could quickly ameliorate symptoms by restoring the blood sugar level but was as quickly followed by the effect of insulinogenesis which depressed the blood sugar to seriously low levels and was not adequately compensated for by the normal adrenalin-effect in homeostasis.

In Romano's case, as in our own, the patient improved remarkably following injections of small amounts of glucose, yet without evidence of increase in blood sugar values. Spontaneous improvement occurred even without glucose due to a well adjusted adrenalin compensation. In our case 1, glucose produced quick recovery from symptoms, yet relapse occurred within three hours, and further glucose was needed. The paradoxical influence in further depressing the blood sugar may hence be interpreted as taking place either by an inhibition of adrenalin effect and/or by stimulation of an endogenous over production of insulin.

To this end, Conn and others resorted to the use of low carbohydrate, high protein diet, ostensibly upon the rationale that glucose would not be made available too rapidly and hence endogenous insulin over production would be avoided (see chart1). Results in his cases as well as in case 2 and 3 above, were extremely gratifying. The authors doubt that dietary management alone would succeed in every case of true pancreatic hypoglycaemia; however, we heartily endorse medical dietary management directed towards sparing endogenous insulin production, especially in all cases with flat or depressed sugar tolerance curves.

Case 1 has remained fully recovered with little or no evidence of neurological residue for a period of twenty months following surgery. In spite of the long standing physical and neurological damage noted in this case, the authors are impressed with the remarkable reversibility of the cerebral reactions. In the remaining two cases, complete amelioration of symptoms has been achieved by medical management alone.

With the accumulation of knowledge in this most interesting field of study, psychosomatic aspects of cerebral reactions must be properly evaluated. On the one hand, in all disturbances of consciousness, delirial and toxic-confusional states, in the broadest aspects, in all states characterized by fluctuations in conscious awareness, the possibility of hypoglycaemic states must be anticipated. On the other hand, a great variety of neurotic manifestations may properly be related either to borderline glucose tolerance or be purely functional in character. Suffice to say, that a reciprocal asymmetric relationship exists between personality and dysfunction of carbohydrate metabolism seems adequately established.

## CONCLUSIONS

1 — A case is presented of spontaneous hyperinsulinism due to pancreatic adenoma with chronic mental symptoms for three years and presented as recovered in the physical and mental aspects twenty months following surgery.*

*Now 33 months post-operative.

2 — Emphasis is made upon the remarkable reversibility of cerebral reactions in chronic hypoglycaemia.

3 — Two cases of so-called functional hypoglycaemia are presented as recovered upon dietary management alone, employing the high protein, low carbohydrate, moderate fat diet.

4 — Hypoglycaemic states may manifest themselves as simulating any and all varieties of nervous and mental disorders.

5 — The psychosomatic aspects of such cerebral reactions are emphasized.

6 — Glucose tolerance studies must be performed in all cases in which fluctuations in the level of conscious awareness are apparent.

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DISCUSSION

S. Soskin, M.D. (Chicago): Members of the Association: I am glad to discuss this paper because it represents a very favorable contrast to many papers which come from like institutions; papers in which ambitious doctors have reported a single test like the fasting blood sugar level or blood cholesterol or cholesterol esters done on fifteen hundred cases. The net result of such mass tests on unselected material is usually less valuable than three intensively studied cases such as have just been presented.

The thing that impresses me as remarkable is the degree of recovery of these cases. It suggests, of course, that one should be on the watch for a possible hypoglycaemia in all epileptiform, confusional and psychoneurotic states. One is struck by the possibility that there may be many patients of this sort in institutions, who could be restored to fairly normal life if found and treated. From that standpoint, this paper is very valuable.

The diagnosis of spontaneous hypoglycaemia is not always easy, because the manifestations are very variable. A great deal depends upon the individual background of the patient. As regards laboratory indices, one of the best is the hypoglycaemic phase of the dextrose tolerance curve, that is the rebound from the highest peak of the dextrose tolerance curve to its lowest point. Another index is the reaction of the patient's blood sugar level to fasting. Food is withheld for twenty-four hours or the patient is placed on a diet of very low nutrient value, while the blood sugar level is followed at intervals.

It is important to remember that the degree of hypoglycaemia which will evoke symptoms in different individuals, varies widely. One patient will show a violent reaction at, let us say, forty milligrams percent; another patient may not show any obvious symptoms (except, perhaps, a slight depression) until the blood sugar has fallen to twenty milligrams percent. I had occasion to observe one patient, in whom the blood sugar has been lowered by protamine zinc insulin, who showed practically no evidence of hypoglycaemia with a blood sugar level of five milligrams percent! One cannot always rely on the patient to show external evidence of hypoglycaemia unless one is very familiar with that patient and can recognize small differences.

When hypoglycaemia is discovered the differential diagnosis as regards etiology must be made between hyper-insulinism and other endocrine disturbances such as hypo-pituitarism and hypoadrenalism. Of course, for this we must rely upon other evidences of functional disturbance of the particular gland involved. But one of the things which is a give-away as regards hyperinsulinism is the fact that the patient tends to have remissions at relatively short intervals. If in addition the patient seems quite well in between attacks, the probability of hyperinsulinism as opposed to the other diagnoses is even greater.

There is one possibility regarding diagnosis which hasn't been explored, and I make the suggestion in the hope that some of you may try it. One of the best indices, of insulin action from a physiological standpoint, is the increased glycogen content of the muscles. The other endocrine causes of hypoglycaemia, if they caused any change in muscle glycogen, would diminish it. Glycogen determinations on muscle biopsy samples would be a relatively simple and potentially useful method of differentiation. I hope that some of you, when you are faced with the diagnostic problem, will avail yourselves of that idea.

At the present time, the further steps in the practical handling of such cases may be stated as follows: When evidence of endocrine disturbance other than hyperinsulinism is lacking, and when the patient cannot be controlled by the high protein-low carbohydrate diet, that patient deserves an exploratory laparotomy. There is no sure way of diagnosing a tumor of the pancreas unless it can be visualized radiologically, and that is possible in only a minority of cases.

Finally, I should like to mention the possibility of a vicious cycle, of a psycho-somatic nature. Let us suppose that a disturbance of the psyche leads to the stimulation of the pancreas through the vago-sympathetic tract, causing hyperinsulinism and hypoglycaemia, which in turn aggravates the psychic disturbance, which in turn increases the stimulation of the pancreas, and so on. A colleague of mine, Dr. Sidney Portis, has recently treated some cases of "fatigue syndrome"

(which, he believed, presented some evidence of subclinical hyperinsulinism) with a high protein-low carbohydrate diet, supplemented by atropine, — the atropine being used for the purpose of interrupting the vagal outflow. These patients seem to have responded remarkably well, and became more amenable to psychotherapy aimed at the primary disturbance. If a similar vicious cycle is involved in some of the cases of frank hypoglycaemia with nervous and mental manifestations, the use of atropine to supplement the high protein-low carbohydrate diet might be considered.

B. Hilkevitch M.D. (Chicago): Mr. Chairman, Dr. Lieberman, Ladies and Gentlemen: To be sure, the number of cases reported in the literature with the spontaneous hypoglycaemic syndrome presents possibly a small fraction of the actual number of patients correctly diagnosed and not reported and a far larger number not diagnosed at all.

My personal contact with this syndrome dates back as far as the year of 1933, when I have seen and correctly diagnosed the first, in my experience, case of spontaneous hypoglycaemia. This was a man (a patient of the out-department of Rush Medical College) in the late fifties. He had a record of several arrests for drunkeness and of being taken off street cars in complete confusion many times. He was under my care for about three years and while on a proper diet he was symptom free.

The second patient was a middle-aged woman, who was referred to me for attacks of paroxysmal tachycardia with angina pectoris. The history revealed that the patient was for five months on a reducing diet of one thousand calories per day. She had lost about fifty pounds of weight and only close to the end of this period she started to suffer with attacks of spontaneous hypoglycaemia and paroxysmal tachycardia with angina pectoris. A well balanced and high caloric diet was prescribed and resulted in complete recovery of the patient.

The third and last case is the patient reported by Dr. Lieberman. This patient I have seen in consultation with Dr. Lieberman. The diagnosis of adenoma of the pancreas was corroborated. Surgery was advised and arranged. The dramatic recovery from a hopeless psycopetic deterioration was so ably reported by the authors. This patient has to be thankful to the diagnostic alertness of Dr. Lieberman.

I will limit my remarks to one type of the so-called spontaneous hypoglycaemia because when correctly diagnosed, surgical interference results in complete recovery in a large percentage of patients. This the organic type. It can be divided into two groups: the group with the diseases of the liver, where there is interference with the glycogenic and regulating mechanisms of the liver, and the other the group with diseases of the pancreas (adenoms, malignancies and hypertrophy of the pancreas).

In the first group a good history, careful physical examination, proper laboratory and functional liver tests, frequently make a correct diagnosis possible. In these, whenever an infectious cause of the hepatits is discovered and, if subject to surgical removal, clinical recovery results.

In the pancreatic group the following criteria are sufficient to make a reasonably correct diagnosis: a history of a normally balanced person prior to the appearance of the hypoglycaemic syndrome, persistence and progressiveness of the syndrome, a very low fasting blood sugar level, a very low blood sugar level during the attacks and finally a "flat" glucose tolerance test. In this group surgical exploration is definitely justified.

I shall close my remarks with a word of caution. Dr. Soskin just now made a statement about the possible etiological relationship of the fatigue syndrome to the spontaneous hypoglycaemia. Every clinician knows how common the fatigue syndrome is observed in nervous and unstable individuals. The favorable therapeutic effect of a high caloric diet in these patients does not justify the conclusion that hypoglycaemia is responsible for the fatigue. The effect of suggestion may be more responsible for the favorable therapeutic result.

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## SURGICAL COMPLICATIONS OF PREGNANCY

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AND
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The series of cases being presented is rather small. However, it is comprehensive enough to illustrate some of the difficulties in diagnosing surgical problems arising during pregnancy, and to emphasize the need for prompt treatment when indicated.

In general, elective surgery is best postponed until after the termination of pregnancy; but, in any case where delay in operating may jeopardize the life or future health of the mother prompt action is the rule even though the pregnancy itself may not survive the operative procedure.

Improvements in operative technique, anesthesia, and post-operative care have removed most of the risk of surgery. The maternal mortality is, with few exceptions, no greater than in the non-gravid state, and the incidence of abortion is little, if any, increased over that for uncomplicated pregnancy. Such major operations as gastrectomy, nephrectomy, bowel resections, and splenectomies have been performed without undue risk to the mother or the fetus.

Presented before the Section on Obstetrics and Gynecology, 103rd Annual Meeting, Illinois State Medical Society, Chicago, May 18, 1943.

For convenience, we may classify these surgical complications as: 1) those involving the organs of reproduction. 2) those involving other organs. The second group may be subdivided into: a) surgical conditions of the abdominal viscera. b) those of extra-abdominal organs.

Fibroid tumors of the uterus usually require no treatment during pregnancy. However, when the tumor has undergone degeneration causing pain and fever, myomctomy may be required at the time. Also a few sub-serous myomas may lie in the lower pelvis. These may cause obstruction to the passage of the baby through the birth canal, and should be removed. There were five patients with fibroids in our series. All were operated because of pain. The term of pregnancy varied from 2½ to 4 months. All were treated by myomectomy. The average hospital stay was 12 days. There was no morbidity and all delivered at term.

Ovarian tumors may cause obstruction to the birth canal, they may become twisted, or they may rupture during labor. These tumors should be removed at an elected time which is most favorable to the maintenance of the pregnancy. A twisted cyst, of course, is an emergency and requires immediate surgery.

We had four patients with ovarian cysts in our series. The term of pregnancy ranged from 2½ to 3½ months. The average hospital stay was 11.3 days. Cophorectomy was the operation performed in each case, and in one it was combined with an appendectomy. There was no morbidity, and all the patients delivered at term.

Most patients with a retroversion of the uterus during pregnancy require no treatment. If it is felt that this needs correction, simple replacement followed by the insertion of a pessary will take care of the situation completely. Occasionally a pregnant uterus may become incarcerated in the pelvis, and this must be corrected surgically. Simple freeing of the uterus and lifting it out of the pelvis is all that is needed.

We have only one patient with this complication to report. It was a woman with a four months pregnancy. Her symptoms were pain with some bleeding. It was thought to be an ovarian cyst pre-operatively. The pregnant uterus was freed and brought out of the pelvis. She remained 12 days in the hospital. There was no morbidity and she delivered at term.

Appendicitis is the most common and offers the most difficulty in diagnosis of the abdominal surgical complications of pregnancy. The diagnosis becomes progressively more difficult as the term of the pregnancy advances, especially after the uterus has become an abdominal organ.

Baer, Reis and Arens made an x-ray study of a group of 78 pregnant women with no history of appendicitis. They found a gradual rise of the appendix from its normal position of early pregnancy in the iliac fossa, to one above the iliac crest near term. They also found that the long axis of the appendix changed from downward to horizontal and finally to a vertical position.

In early pregnancy the diagnosis may offer little more difficulty than in a non-pregnant patient. The white blood count is of less value as it is normally elevated during pregnancy. Appendicitis is often confused with pyelitis and cystoseopy must frequently be resorted to before the differential diagnosis can be completed. Frequently the diagnosis is overlooked due to carelessness of the doctor. Lower abdominal pains are frequent during pregnancy, and too often ignored. Any right lower quadrant pain should be thoroughly investigated.

The incidence of appendicitis is no higher during pregnancy than it is normally. Pregnancy occurs as a complication of appendicitis in 1.5% to 2.5% of cases as reported by various authors. Baer found .17% of appendicitis during pregnancy. Recurrent appendicitis is more apt to recur during pregnancy, due probably to disturbance of bowel function, increased vascularity and a tendency to constipation. Elevation of the cecum and the stretching of old adhesions may tend to aggravate a previous inflammatory process in this area. The greatest number of cases of appendicitis during pregnancy occur during the second trimester.

The prognosis to the mother and the fetus is very little affected by appendicitis or appendectomy if the appendix is unruptured or if the operation is done promptly. However, if the appendix has ruptured the incidence of abortion or premature labor rises to 40 to 80% and the maternal morbidity and mortality is markedly increased. The percentage of patients developing generalized peritonitis is higher as the appendix lies higher in the abdomen and this area is more vulnerable to infection

than the pelvic peritoneum. Less serious, late results of a ruptured appendix may be delayed involution of the uterus due to adhesions, sterility, ectopic pregnancy, and habitual abortion. Prompt diagnosis and surgical removal of the diseased organ offer the only good results in the treatment of acute appendicitis. It is better to remove an occasional normal appendix than to chance a ruptured appendix during pregnancy. Drains in the lower abdomen should not be used unless necessary as they tend to promote abortion.

In our series there were 15 patients operated for appendicitis. Eleven of the appendices were unruptured and in this group of patients there was no morbidity and there were no patients who aborted. The average hospital stay was 9.4 days. The term of pregnancy varied from 6 weeks to 6½ months. Eight of them were of less than three months duration.

The other four patients illustrated the danger of appendicitis during pregnancy. They were all over 5 months pregnant and each offered difficulty in diagnosis. One of these four patients was fortunate in that abcess formation took place and drainage of this abcess resulted in a simple 13 day convalesence with no morbidity. She delivered normally at term.

The others had ruptered appendices with generalized peritonitis. They all had premature labors during their hospitalization. The length of hospitalization was from 15 to 50 days. Two of these patients almost died. The third was spared a more serious post-operative course, probably because she was a recent case and received the benefit of sulfadiazene. These patients are discussed in some detail to illustrate the seriousness of appendicitis as an obstetrical complication.

Gall bladder disease is encountered rather often during pregnancy. W. J. Mayo once stated that 90% of women who have gallstones and have had children date the onset of the disease from a pregnancy. Many pathological conditions of the gall bladder do not require immediate surgical treatment and the operation is best postponed until after the termination of pregnancy. Empyema, obstruction of the duct and frequently stones with inflammation require prompt surgical treatment. Mussey and Crane reported 74 patients on whom they operated. There was no maternal mortality and only two aborted. We had only 1 patient in our series. She had a cholecystectomy followed by a normal convalesence, and she delivered a baby at term.

Intestinal obstruction is a rather rare complication of pregnancy. It requires prompt surgical relief at this time as well as at any other time. The results as to maternal and fetal life vary directly with the promptness of operation. A patient who has had an obstruction long enough to require resection and perhaps drainage is very likely to have an abortion. Simple freeing of adhesions requires little manipulation and the pregnancy is only slightly endangered.

We had two patients who developed intestinal obstruction. One patient had a 7½ months pregnancy and the other had only one of 2 months duration. Simple freeing of the bowel was the only procedure used. There was no morbidity, and the average hospital stay was 13½ days. Both patients carried their pregnancies to term.

Other major abdominal operations for such conditions as perforated ulcers, diverticulitis, or intestinal tumors may and should be done promptly during pregnancy.

Now we may consider the group of patients who have surgical diseases arising outside the abdominal cavity.

We had one patient who was operated for a femoral hernia because of repeated severe attacks of pain. Her pregnancy had reached 2½ months. She spent 10 days in the hospital and had no elevation of temperature. She is now 8 months pregnant. Very few hernias need surgical treatment during pregnancy. They can be carried through with a truss or other support and the strain of second stage labor can be prevented by operative delivery at that time. Where required, the operation can be done with no effect on the pregnant uterus.

Toxic adenomatous and exophthalmic goiters are rare during pregnancy. Mussey and Crane reported 34 patients operated at the Mayo Clinic. There were 2 abortions, and 2 premature labors, and these were attributed to other causes by the authors.

Nephrectomy must be performed during pregnancy, for any condition where delay in operating would be harmful to the mother. Mussey and Crane reported 14 patients, one of which aborted. We had one woman who was operated for pyonephrosis. She had a 3 weeks pregnancy

which was not known at the time. There was no morbidity, and she spent 15 days in the hospital. Her baby delivered at term.

We have a small group of patients who had the following minor operations: hemorrhoidectomy, removal of cervical polyps and Bartholin cysts, tonsillectomy, and small breast tumors. There was no morbidity, and none of them aborted as a result of any surgery.

Briefly, any urgent surgery may be done during pregnancy with no great cause for concern. The mortality is no greater and the incidence of abortion is not appreciably greater than normally. Where possible, the most favorable time should be chosen. Abdominal cases are done preferably during the first 5 months. The pregnancy is safer if the operation can be done following formation of the placenta.

We should be reasonably certain of the diagnosis and that surgery offers the best treatment for the patient. Also, we must decide whether or not the situation is urgent or if it can wait until after the child is born. We must consider the risk to the mother and child. Postoperative care is very important. The liberal use of sedatives is especially important in the prevention of abortion. Progestin has been used commonly for this same reason and probably has saved many a pregnancy. The sulfa drugs have been of definite value in combating infections and thus preventing some abortions and maternal deaths.

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DISCUSSION

Dr. W. A. Malcolm, Peoria, Ill.: After listening to Dr. Cummings' complete paper, there is little to discuss about the surgical complications of pregnancy. However, I should like to repeat that the elective procedures are not undertaken during pregnancy unless necessary, and that little risk is involved on a pregnancy when the anesthetic, surgical technic, and after-treatment is carefully followed.

I feel that we should stress the point that the majority of pregnant women with fibroids go through delivery without difficulty. Yet, with any tumor, we should know its size and position in relation to the pelvis, its rate of growth, and the amount of pain that is complained of by the patient from time to time. We should permit these factors to be the index for the treatment of the case. Moreover, I personally feel that a dermoid cyst is the most serious of pelvic tumors in pregnancy. Nevertheless, every pain in the right lower quadrant should be carefully watched until an appendicitis is definitely ruled out.

I should like to build up for discussion two conditions in pregnancy — one of carcinoma of the cervix; and the other, a venesection for phlebitis in superficial veins during pregnancy.

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# THE TREATMENT OF BENIGN UTERINE BLEEDING IN THE MENOPAUSE

J. ROBERT WILLSON, M.S., M.D.
CHICAGO

Increased, prolonged, or irregular periods of bleeding during the menopausal age, present a problem with which physicians are not uncommonly confronted. The decline of ovarian function at this time usually results in either an abrupt cessation of the menstrual periods, a gradual decrease in amount of bleeding, or an increase in the intermenstrual interval. In most instances any increase in bleeding is associated with the irregular stimulation of the endometrium by the ovarian hormones or with uterine fibroids.

## INVESTIGATION

The most important step in the investigation of a patient with the complaint of increased bleeding during the climacteric, is to eliminate malignancy as an etiological factor. History and bimanual examination alone are insufficient to prove that the bleeding is of benign origin. Miller and Sehring, studying a group of patients on whom a *clinical* diagnosis of uterine fibroids had been made, found adenocarcinoma of the corpus to be present in 11.7% by microscopic examination of the curettings. The essentials in the investigation consist of a careful history and bimanual examination, visualization of the cervix, biopsy of suspicious cervical lesions, and a thorough curettage.

## CHOICE OF TREATMENT

The control of benign menopausal bleeding may be accomplished by one of two methods; hysterectomy or castration either by the use of intrauterine radium, or deep x-ray therapy. Since no single method of treatment is ap-

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plicable to every patient, all the facts must be carefully analyzed before a plan of therapy is decided upon.

Irradiation therapy is an efficient, relatively simple method of controlling bleeding when administered by individuals trained in the technics of its application. It must be considered as an acceptable method to be used as the procedure of choice in carefully selected cases, and not as a substitute which can be administered only to patients who are poor surgical risks.

Selection of subjects for irradiation, either by x-ray or radium, should be made only after it had been shown that there is an indication to terminate the function of the ovaries. Of at least equal importance, is to rule out the presence of any condition which may be a contraindication to irradiation therapy.

The use of endocrine preparations in an attempt to control bleeding in the menopausal period is ineffective and dangerous. These substances are merely substitutes for the normal gland secretions and do nothing to correct the underlying etiological factor responsible for the bleeding. The treatment of an undiagnosed uterine carcinoma by hormones may delay the establishment of the true diagnosis until the lesion has advanced to an uncontrollable stage.

### CONTRAINDICATIONS TO IRRADIATION

*Age:* Because either x-ray or radium controls the bleeding by elimination of ovarian function, neither should be used in patients who are younger than 40-42 years of age. The precipitation of the menopause in young individuals is undesirable; they may better be treated by hysterectomy and ovarian conservation.

*Uterine Size:* The bleeding associated with myomatous uteri may usually be controlled by irradiation; in some cases there may be a reduction in uterine size following castration, but since the degree of regression of the tumors cannot be predicted, uteri larger than that comparable to a gestation of 10-12 weeks duration should be removed. The amount of effective irradiation from radium depends upon the distance from the source to the ovary upon which the effect is desired. Consequently, if the cavity of the uterus is large and the walls thick, an amount insufficient to eliminate function will be delivered to the ovaries and the bleeding may continue.

*Pelvic Inflammatory Disease:* The manipulation necessary for the insertion of radium and the effect of the irradiation itself may, in some instances, activate a latent mild inflammatory process and produce a severe pelvic or generalized infection. Patients with a history of previous pelvic inflammation should, in most instances, be treated by surgery.

*Previous Pelvic Surgery:* Loops of bowel adherent in the pelvis following surgery may receive doses of irradiation large enough to produce destruction and subsequent stricture. The normal peristalic action of free intestine prevents any single segment from over irradiation; this is not possible when the bowel is fixed by adhesions.

*Ovarian Neoplasms:* Because the pathology of adnexal masses cannot be diagnosed accurately by bimanual examination alone, surgery rather than irradiation is indicated unless the adnexae are normal to palpation.

*Symptoms Other Than Bleeding:* The symptoms produced by the pressure of an enlarged uterus upon adjacent pelvic structures will not be relieved by x-ray or radium. Hence, surgical removal of the uterus is the method of choice in such cases. Tenderness upon palpitation of uterine myomas may indicate degenerative change in the tumors. Irradiation, by diminishing the blood supply, may increase the degeneration, hence initial surgery is the method of choice in such a case.

*Pedunculated Submucous Fibroids:* Because the bleeding associated with pedunculated submucous fibroids may result from destruction of the tumor itself, radium is contraindicated. The necrosis of the tumor may be increased by the destructive action of the radium; the bleeding and discharge may increase, and local or generalized infection may follow.

### TECHNIC OF IRRADIATION

*X-ray:* Since the effect desired from the use of x-ray therapy is complete inhibition of ovarian function, it is essential that enough be given to permanently castrate the patient. The amount delivered to the skin surface is of much less importance than the amount which reaches the ovaries. Hence computation of the percentage of the surface dose which reaches the midpelvis is necessary. Brown and his co-authors[1] have demonstrated that the administration of approximately 625 r. to each ovary is necessary to in-

sure castration in a high percentage of cases treated. They give dosage tables designed to deliver this amount of radiation to the ovarian region in various sized individuals.

*Radium:* The effect of radium is twofold; castration plus a sclerosing action on the endometrium and blood vessels. Since the treatment is directed toward the ovaries and endometrium, all the radium should be inserted into the uterine cavity above the internal cervical os. Two capsules with a filtration capacity equivalent to that of 2 mm. of brass are inserted into the uterus. The upper one, in the body, contains 50 to 100 mg. of radium and the lower one, in the cervix, is empty. The soft locally destructive beta rays are filtered out by the capsule and the resulting radiation is almost entirely from penetrating gamma rays. The secondary soft radiation set up by the passage of the rays through the capsule, may be filtered out by enclosing the capsule in a few mm. of some organic material such as rubber. A total dosage of about 1800-2000 mg. hours will produce castration in most patients near the menopause.

## COMPLICATIONS

Treatment by irradiation either with x-ray or with radium is not without danger. The complications may be kept at a minimum by utilizing the method only for those patients in whom there is no contraindication to radiation and by a thorough understanding of the action of irradiation upon the tissues to be treated.

*Infection:* Previous pelvic inflammatory lesions may flare up following radiation. Pyometria or any other acute genital tract infection may be spread to the peritonal cavity or blood stream by the manipulation associated with insertion of radium. All genital tract infections must be eliminated before radium is applied.

*Perforation of the Uterus:* If the wall of the uterus is perforated either by the curette or the radium, the latter should not be inserted. Infection may be carried directly to the peritoneum, or the bowel may be heavily irradiated by direct application of radium in the peritoneal cavity.

*Bowel and Bladder Complications:* Adherent bowel in the pelvis may receive heavy doses of irradiation and the destruction may be sufficient to produce a stricture in this area. If the radium is not securely placed in the uterus, it may slip into the vagina; the result of heavy irradiation of the recto-vaginal or vesico-vaginal septum after this accident often is a fistula which is most difficult to close because of intense scarring and diminution in blood supply. A tight vaginal pack not only aids in keeping the radium in place, but increases the distance of both the rectum and the bladder from the radium, thus keeping irradiation of these structures at a minimum.

*Cervical Stenosis:* Radium in the cervix may produce enough destruction and scar tissue to close the canal completely. The retained secretions in the uterus may become infected and pain is a common symptom. Restoration of a patent cervical canal is often difficult and hysterectomy may be necessary in some cases.

*Chronic Discharge:* Following radium castration there is usually a watery discharge from the uterus which lasts from 3 to 6 weeks. If the amount of radiation given is too heavy or filtration of the radium inadequate, ulceration of the uterine wall with a chronic infected discharge may result. This is an uncommon occurrence following x-ray therapy and may be kept at a minimum by careful use of radium.

*Uterine Carcinoma Following Irradiation Castration:* The reported cases of uterine carcinoma following irradiation show an incidence of about 0.5%. Since some of these were diagnosed within a few months of the initial treatment they were presumably present at that time. Although a careful curettement will, in most cases, remove malignant endometrium if it is present, a small localized growth may occasionally be overlooked. Because the amount of radiation necessary to control benign bleeding is entirely insufficient for the treatment of cancer, it is essential that every step be taken to rule out malignancy as certainly as possible. The whole cavity of the uterus should be curetted under anesthesia; endometrial biopsy in the office is no substitute for a thorough curettage in the hospital. Microscopic examination of the tissue by a competent pathologist not gross inspection alone is of utmost importance.

## SUMMARY

Although the mortality rate for hysterectomy can be kept low (Danforth 0.5%)[2] the general rate is much higher than that for irradiation in this selected group of patients. Because the use of radiation is not without danger, especially when used in the face of one of the many contraindications, its use should be limited to in-

dividuals who either are proper candidates for radiation castration or who are poor surgical risks.

Most of the complications may be attributed to the use of irradiation in patients in whom there is a definite contraindication to this type of therapy or to the technic of administration. The majority of the complications are associated with the use of radium. Hence, if a competent radiologist, trained and equipped for the administration of x-ray therapy is available, this method of castration may well replace the use of radium.

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DISCUSSION

Dr. Herbert E. Schmitz (Chicago): If I were asked what subject I like to discuss, I would have to admit it is the use of radium in benign uterine bleeding.

I wish to stress dosage. Dr. Willson has told us, he advocates a dosage of at least 1800 mg. hours of radium in the uterus. If you will permit me to sketch a uterus, I shall demonstrate why we use a "Y" capsule in the uterine fundus. With this method 80 per cent of the rays are evenly distributed throughout the uterine cavity. In studying uteri removed after such therapy we found the myometrium ulcerated if we applied radium in a straight capsule and left it in position for a period of time adequate to give 1800 mg. hours. To escape from this complication the "Y" capsule was constructed. If you choose to use over 2000 mg. hours in a straight capsule, filtering with 2 mm. of brass or the equivalent, then the capsule should be removed and reinserted after each 1000 mg. hours.

I wish to stress that when using external irradiation, it is the dose applied in the uterus, not the dose applied to the anterior abdominal wall that is important. The dosage of x-ray should be divided in order to minimize radiation sickness as much as possible.

The other thing to remember is that radiation treatment is not effective for some weeks. Do not repeat or add to the dose until sufficient time has elapsed for the first dose to become effective.

Dr. Willson: All patients treated with endocrines are not as fortunate as the ones treated by Dr. Carlisle's method. Many patients with uterine carcinoma are treated by endocrines without benefit of examination, and as far as I know there have been no cures reported.

## WOMEN STUDENTS IN MEDICAL SCHOOLS

The British correspondent of *The Journal of the American Medical Association,* in the April 15 issue, reports a changing point of view regarding women medical students in Great Britain. He says:

"In London there are twelve medical schools; one school admits only women students, two take a small proportion of women and the remaining nine have expressed inability to take women . . . .

"The war has produced an increasing demand for women doctors, and thus again brings up the subject of greater facilities for the medical education of women . . . . The minister of health has declared himself unable to press acceptance of women on medical schools. . . . The senate of London University appointed a highly authoritative committee to report on the desirability of providing facilities for the medical education of women. Six of the seven members of the committee recommended the opening of all London medical schools to women on terms of equality with men. By an overwhelming majority the senate approved this. The *Times* states that as a result all the nine schools which now exclude women will probably admit them. . . ."

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## THE AMERICAN CONGRESS OF PHYSICAL THERAPY

Will hold its twenty-third annual scientific and clinical sessions September 6, 7, 8 and 9, 1944, inclusive, at the Hotel Statler, Cleveland, Ohio. Rehabilitation is in the spotlight today — Physical Therapy plays an important part in this work. The annual instruction course will be held from 8:00 to 10:30 A. M., and from 1:00 to 2:00 P. M. during the days of September 6, 7 and 8. The scientific and clinical sessions will be given on the remaining portions of these days and evenings. All of these sessions will be open to the members of the regular medical profession and their qualified aids. For information concerning the instruction course and program of the convention proper, address the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago 2, Illinois.

# Industrial Health

Committee On Industrial Health — Frederick W. Slobe, Chm., 2024 South Western Ave., Chicago, Frank P. Hammond, H. A. Vonachen, R. I. Barickman, C. O. Sappington, Milton H. Kronenberg.

## PROTECTING THE PLACE OF EMPLOYMENT[1]

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In the practice of industrial hygiene there are at least two main types of services required for the solution of industrial health hazards. These are medical and engineering.

The terms medical and engineering are employed in the present discussion in a broad sense. Under medical would come the allied professions, such as nursing and denistry, and the various medical specialities, such as pathology and roentgenology. Engineering services would include, in addition to engineering, non-medical personnel engaged in public health work, such as chemists, bacteriologists, and biometricians. In other words, the functions coming within the province of the medical department are concerned with personal hygiene, while the functions with which the engineer concerns himself deal with environmental hygiene.

It is within the province of the medical department to diagnose diseases and especially to recognize the existence of such diseases as may be due to the factory environment; while, based on the findings of the physician, the engineer is in a position to learn where control measures are to be initiated. To initiate such control measures, the engineer must study local plant conditions which may be detrimental to health and, by precise measures, determine the extent of the hazard. Once this has been done, the engineer must consider methods for controlling or minimizing the hazardous conditions and also for studying the effectiveness of these measures. Obviously, the engineer has the advantage of being able to utilize medical findings in the field of toxicology in determining potential health hazards.

It has been known from ancient times that ill health and premature death were associated with the nature of man's livelihood. In recent years, numerous studies have clearly indicated that the health of workers engaged in industry is affected by the conditions, materials, and processes used. For these reasons, one of the most important functions in industrial hygiene is the study of the workroom environment and its effect on health , in order to evolve methods for the control of the environment.

If we examine the literature on industrial hygiene, we are at once confronted with the fact that the methods employed in the study of the effect of industrial health hazards differ but little from those used in investigations of other phases of public health. This is not strange, since in the study of industrial diseases it is essential, as in communicable disease investigations, to determine the etiology, pathology, symptomatology, and the application of measures to prevent or control the disease. The term *industrial epidemiology* as used here refers to the methods used for the investigation of diseases occurring in industry or among industrial workers, and the subsequent determination of methods of prevention or control of such diseases.

Prior to discussing the various problems in industry, it may be well to define the present conception of industrial health hazards.

1. Presented at the Postgraduate Course in Industrial Medicine and Hygiene, University of Illinois, College of Medicine, Chicago, Illinois, February 15, 1944.
2. From the Industrial Hygiene Division, Bureau of States Services U. S. Public Health Service, Federal Security Agency.

CLASSIFICATION OF HEALTH HAZARDS

There are several classifications of health hazards in industry, but for our own purposes we divide the industrial health hazards into three main types. These are chemical, biological, and physical.

Under *chemical hazards,* we have the important group of poisons, of which there are a great number and variety. These hazards can be classified on the basis of their physical characteristics. Many other classifications are possible, but this classification is one of the simplest and most convenient. Under this classification, we encounter solids, liquids and gases. While solids and liquids may be hazardous by direct contact, the chief problems encountered by the industrial hygiene engineer are the control of chemicals dispersed in the atmosphere. Dispersed chemicals may be in the form of dusts, fumes, vapors, mists, or gases.

Among the solids, dusts are of signal importance, in view of the large number of persons exposed to dusts, and also because such exposure has been associated with serious damage to the human system. Dusts of a siliceous nature may produce damage to the respiratory system, while dusts of the heavy metals group (such as lead and cadmium) may cause systemic poisoning. We must also consider the health hazards resulting from the explosive characteristics of some dusts and the allergic reactions resulting from exposures to other dusts.

Fumes are also chemicals dispersed in the atmosphere in a solid state. The toxic fumes of industrial significance are those arising from the oxidation of vapors from metals heated to high temperatures. The most common of these fumes which have been found to cause poisoning include the oxides of lead, arsenic, cadmium, and manganese.

Many chemicals of a poisonous nature are constantly being used in liquid form in industrial processes. A few, like tetraethyl lead, may be absorbed through the skin, producing toxic symptoms in a comparatively brief period of time. Others, such as acids and caustic alkalies, may produce burns, while certain dyes and dye intermediates may produce dermatitis. The list of chemicals which have been known to produce injury is very extensive. Chemicals normally occurring in the liquid state when encountered in the gaseous state are known as vapors. Many chemicals volatile at ordinary room temperatures are used extensively in industry in the form of solvents and lacquers. They constitute an important group of poisons and are characterized by their low density and volatility. Among some of the common industrial vapors of a toxic nature are such substances as benzol, carbon disulphide, carbon tetrachloride, trichlorethylene, and the various alchohols.

The gas hazards of industry are also of exceeding significance, and the fatalities from gas poisoning still constitute a major problem in industry. Gases occur as raw materials, as products, and as agents of manufacture. The inhalation of many gases foreign to pure air may be said to be almost universal. Among such gases common to everyday industrial life are carbon monoxide, sulphur dioxide, hydrogen sulphide, hydrogen cyanide, ammonia, and the gases employed for refrigerating purposes such as methyl and ethyl chloride.

A knowledge of the physiology of respiration is essential in the study of the effects of toxic gases on the human system. From the standpoint of respiration, gases may be classified as asphyxiants, irritants, volatile drugs, and drug-like substances.

*Biological Hazards.* — Biological health hazards include the infections, such as anthrax, tuberculosis, typhoid fever, pneumonia, and other respiratory diseases. Illness may result from the handling of contaminated materials, such as skins or wool infected with anthrax; from a lowering of resistance to infection by arduous duties and extreme changes in temperature, exemplified by the high incidence of pneumonia in certain occupations in the steel industry; or by direct exposure to active cases of disease required by the nature of one's duties. The investigations of air bacteriology and studies of the methods of controlling bacterial contamination of the air have become extensive during recent years.

*Physical Hazards.* — The Physical hazards to health are extremely important in industry since in this category are the accidents caused by machinery and other environmental conditions; excessive humidity, abnormal temperature, extreme temperature changes, defective illumination, repeated motion, shock, vibration, noise and abnormal atmospheric pressures.

### THE PRELIMINARY SURVEY

The first task of an engineer encountering a problem in the field of industrial hygiene is the determination of the nature and scope of the problem. In the absence of occupational disease and sickness statistics, health hazards may be ascertained by a preliminary survey of the working environment. This preliminary survey will serve as a guide for the more detailed studies which may be necessary to determine any relationship between that environment and its effect on the health of the worker. This preliminary or reconnaissance survey includes the sanitary appraisal and the occupational analysis of the workroom and the employees. Such an investigation shows the extent to which certain facilities are furnished the workers with reference to accident prevention, first aid, medical and nursing services, engineering control of occupational diseases, and the availability of records of accidents and illness. It also indicates the specific occupational exposure to various health hazards, whether of a chemical, biological, or physical nature, and gives an idea of the control measures in practice for each hazard.

In order to assist the engineer in the conduct of such reconnaissance surveys, the forms shown in figures 1, 2, 3, and 4 are recommended. In practice, the reconnaissance survey consists of carefully filling out these inspection forms and jotting down any additional notes on items which may not be provided for in the forms. After completion of the forms, detailed analysis of data in them is needed. It is this analysis which gives a complete picture of hygienic conditions in each workroom.

One illustration of the value of the preliminary survey will suffice. The Industrial Hygiene Division has been receiving reports from industrial sick-benefit organizations since 1922. A study of these reports of the steel industry showed consistently higher incidence rates for pneumonia in all forms than those for employees of other industries. For the period 1922 to 1928, inclusive, the pneumonia case rate in the steel industry was nearly 70 per cent above the rate in the reporting public utilities, and nearly 50 per cent higher than the rate for all other reporting industries as a group.

Among industrial workers, generally one may expect an average pneumonia rate of 2.5 to 3 cases per year per 1,000 men; for the steel industry the average was 4.4 cases per 1,000 male members of the reporting sick-benefit organizations. This result is the more striking on account of the low morbidity rates for nearly all of the major causes of illness among steel workers — which is suggestive of a favorable position of the men in the industry from a physical standpoint. A five-year inquiry into the causes of high pneumonia rates among iron and steel workers in a representative mill ruled out such factors as the pneumonia mortality in iron and steel manufacturing centers, seasonal variation in the frequency of disease, environmental epidemics, economic status, age of the men and their nationality, and extent of addiction to alcoholic stimulants, and still showed that an extensive amount of pneumonia existed in certain departments, such as the blast furnace and open-hearth steel mills. Thus it was clearly indicated that the nature of the work and the working environment probably played an important role in the incidence of pneumonia among steel workers. When one realizes, however, that these departments contain anywhere from 60 to 100 different occupations, the task of a preventive program is almost a hopeless one, unless definite information is obtained concerning such important items as:

(1) The number of persons in each occupation
(2) The activities associated with each occupation
(3) The health hazards associated with each occupation
(4) The incidence of pneumonia for each occupation

Such information was easily obtained from a reconnaissance survey. This survey showed among other things that the disease was associated with exposures to heat hazards when subjection to wide changes of temperature was involved; also with the outdoor exposure to inclement weather, and with indoor exposure to humid, drafty conditions and wet clothing. Sudden cooling or chilling of the body was indicated as an important predisposing factor. One of the interesting findings of this study was the concentration of pneumonia cases in relatively few occupations. In the case of the blast furnace department, high pneumonia rates were limited

to 10 of the 68 occupations in this department. This finding not only simplified the environmental studies, but also made the studies of the control measures less difficult. Thus the engineer was able to concentrate on the important factors and omit the unimportant. Once the occupational exposure factor had been evaluated, the engineer was in a position to initiate control measures for the minimization or the elimination of the hazards demonstrated to be deleterious to health.

### DETAILED SURVEY

In order to determine a worker's exposure to materials or conditions incident to his employment, one must have precise data on such exposure. In some cases the difference between a hazardous and a non-hazardous condition may depend upon whether or not the worker is exposed continuously to concentrations of materials bordering on the threshold limit of toxicity (the maximum permissible concentration).

For example, in the case of exposure to lead oxides, where the maximum permissible concentration is 0.15 milligrams of lead per cubic meter of air, it is very important to know whether the worker is inhaling lead in concentrations slightly above or below this limit. Frequently, a difference of a milligram in the day's intake of lead by an exposed worker may spell the difference between a safe or an unsafe condition.

Detailed appraisals of exposure enable one to determine the extent of the hazard. This is accomplished by determining, by precise methods, the occupational exposures to the toxic materials or conditions under consideration.

Today, the engineer and chemist have at their disposal delicate instruments and methods of analysis unprecedented in the history of industrial hygiene, and the knowledge concerning such matters is increasing from day to day. It is no longer necessary in industrial hygiene to guess as to actual exposures. Where maximum allowable concentrations have been established, the detailed engineering study is a direct indication of the existence or absence of an industrial health hazard. By proper evaluation of the chemical composition of the atmospheric contaminants, the concentration of these contaminants in the air, and the average exposure of the worker each day, we are able to predict the injury that will be caused. For certain materials, as silica dust, which have a slow but cumulative adverse effect, the above mentioned data applied to the worker's occupational history enable us to estimate the amount of damage that has already been done.

When maximum permissible concentrations of an atmospheric contaminant are not known, the detailed engineering study will serve a second purpose if clinical investigations are made concurrently with environmental studies. The findings on occupational exposure may indicate the permissible amounts of the toxic materials that may be tolerated with safety. The maximum permissible concentration of lead dust was determined by a correlation between lead dust exposure, years of exposure, and the percentage of exposed workers with diagnosed early plumbism. It was concluded that 1.5 milligrams of lead dust per cubic meter of air, except for very prolonged exposure, was the limit of safety under the conditions encountered in these studies. Important findings of this type are of great value to engineers, since they give them a basis upon which to develop protective devices and control measures, such as exhaust ventilation, respiratory protection and good housekeeping. The third purpose served by the detailed engineering study deals with the control of health hazards. By such studies one can determine the efficiency of any devices that may have been introduced for the control or elimination of these hazards. The study of the efficiency of various methods employed for the control of industrial health hazards will be treated in more detail in the next section.

It is desired, however, in closing this portion of the discussion to point out that the engineering problems in industrial hygiene are constantly increasing in number, especially now when new chemicals and processes are being introduced into our war industries. Our knowledge of the action of these sustances on the body is constantly being augmented by toxicologists and by field studies of this type described. It is the engineer's task, once this knowledge is available, to advise ways and means for controlling these injurious materials and conditions.

### THE CONTROL OF INDUSTRIAL HEALTH HAZARDS

The control of industrial health hazards is also a joint function of the medical and engineering departments. The *physician* and his coworkers recognize the existence of diseases due to the workroom environment, and exercise medical supervision, and initiate studies designed to

eliminate dangerous conditions. The *engineer* and his co-workers determine the extent of the hazard, and, armed with knowledge of the toxicity of the materials involved, are able to develop methods and equipment for the control of the hazard. They should also call the physician's attention to new materials and operations that may be hazardous.

There are no set rules for the mechanical protection to be instituted in an attempt to control an industrial health hazard. The specific conditions encountered in each plant determine the type of protection to be employed. There are, however, 5 principal methods for minimization of an industrial exposure:

(a) Substitution of a nontoxic material for a toxic one.

(b) Complete enclosure of a harmful process.

(c) Local exhaust ventilation.

(d) Wet methods in the case of certain specific processes.

(e) Respiratory protection.

In many instances it may be necessary to employ a combination of the above methods in the control of a single exposure, or to combine one of these methods with emergency methods such as:

(a) Isolation of the harmful process.

(b) General room ventilation.

(c) Decreasing the work period to decrease the total exposure.

*Substitution.* — The only method for completely eliminating all possibilities of exposure to a toxic material is to substiute a non-toxic material for the toxic one. This is practicable in some instances where the toxic substance is not an essential ingredient of the finished product, or when a nontoxic substitute will give a substitute product of equivalent value. Where the desired finished product is itself toxic, substitution is of course impossible. This is illustrated by such processes as the manufacture of trinitrotoluene (TNT) and other war explosives.

One example of successful substitution is the use of steel grit or an artificial abrasive in place of sand in the sandblasting process, in operations where it is not necessary to use quartz sand. The decrease of dust resulting from such a substitution as well as the decreased total amount of silica in the air is shown in Table I.

TABLE I

REDUCTION IN CONCENTRATION AND QUARTZ CONTENT OF DUST IN SANDBLAST ROOMS WITH THE SUBSTITUTION OF STEEL FOR SAND ABRASIVE

| Type of Abrasive | Average Dust Concentration in Millions of Particles Per Cubic Foot | Percentage of Quartz |
|---|---|---|
| Sand | 969 | 42-98 |
| Steel | 155 | 3 |

Another example of successful substitution is illustrated by the elimination of mercury nitrate from carroting solutions in the fur hat industry.

Where is is impossible to discover a harmless substitute for an extremely toxic material, it is frequently possible to substitute a less harmful one for the more harmful one. The substitution of toluol in place of benzol is an example of this procedure. Toluol is a toxic material, but its maximum permissible concentration is about twice that of benzol.

*Enclosure.* — Where a toxic material must be used, the possibilities of its becoming an atmospheric contaminant may be minimized by completely enclosing the industrial process. An example of the protection secured by this procedure is illustrated by Table II which shows the decrease in dust exposure resulting from the use of the modern enclosed sand blast barrel used for cleaning small objects.

TABLE II

DUST CONCENTRATIONS FOR SANDBLAST INSTALLATIONS REGARDED BY MANUFACTURERS AS "IDEAL" IN COMPARISON WITH OTHER EQUIPMENT

| | Average Dust Count in Millions of Particles Per Cubic Foot | | |
|---|---|---|---|
| | Barrels | Tables | Cabinets |
| Ideal | 1.7 | 0.2 | 1.9 |
| Other | 29.0 | 22.0 | 38.0 |

*Wet Methods.* — Although the use of wet methods is limited to dust producing processes, this type of control has been found efficacious in many industries. In rock drilling and loading it has been possible to reduce the dust concentration from more than 500 million particles to

less than 30 million particles per cubic foot of air. Recent studies of rock drilling operations have shown that wet methods employed in combination with general exhaust ventilation will result in even lower dust concentrations than the reduction shown above.

*Local Exhaust Ventilation.* — Local exhaust ventilation is the most freqently used method of control of certain workroom conditions that are harmful to health. It is one of the methods that aims to prevent atmospheric contamination by collecting and removing dusts, fumes, vapors, and gases at their point of generation. There are few industries in which local exhaust ventilation is not used in some form, and in some large industries the complete system may be as extensive as the productive equipment.

The design of the ventilation system should be considered in the design of new buildings so that the system will form an integral part of the completed structure. The design and installation of a ventilation system in a building where the installation of equipment has been completed without previous consideration of control measures handicaps the ventilation engineer, increases the cost of the control system, and will usually increase operating costs.

A local exhaust ventilation system consists essentially of 4 parts:

(a) Hoods or partial enclosures.
(b) Air ducts.
(c) A collector.
(d) An exhauster (fan, ejector, etc.)

So much depends on the correct design and construction of hoods and exhaust systems that they should be laid out by well-trained engineers and maintained with great care. In recent years a tremendous amount of basic engineering data on this type of control has been accumulated. Data pertaining to the quantity of air that must be removed in order to control hazards or nuisances are available, as well as data on the necessary entrance velocities to hoods having certain size and shape characteristics. However, a through knowledge of the physical laws governing the flow of air into suction openings, and of the physical and chemical properties of the various atmospheric contaminants, is essential before attempting to design an efficient hood, that is, a hood that collects the contaminant effectively with a minimum of air removal, and without interference in the operation of the tool or process.

Minimum air velocities across the source of generation, for the capture of materials released in certain manufacturing processes, vary from as low as 75 to 100 feet per minute where able air movement, as in the evaporation of solvents from degreasing or plating tanks, to as high as 2,000 or more feet per minute where materials are released with great force, as in grinding or abrasive blasting.

Air ducts or exhaust pipes convey the contaminated air to the collector and exhauster. The size of these pipes is governed by the amount of air that must be removed and by the minimum and maximum controlling velocities. The minimum velocity must be above the velocity that will permit settling of solid particles in the duct system, while the maximum velocity should be below the velocity that will cause excessive abrasion on the pipes or excessive noise. Alden recommends minimum conveying velocities varying from as low as 2,000 feet per minute for vapors and gases to as high as 5,000 feet per minute or more for large particles of heavy materials such as lead dust. All exhaust ventilation systems do not require collectors of air purifiers, but these should be used where the collected material is valuable, where the abrasive or corrosive qualities of the material will injure the exhauster, or where the unpurified air will produce a nuisance or a health hazard. If air purifiers are not used, the discharge stacks of the exhaust system should be located at a point that will prevent contaminated air from reentering any occupied buildings. Types of air purifiers or collectors commonly used include cloth filters, electrostatic precipitators, air-washers, and cyclones. It is always advisable to locate the collector upstream from the exhauster to prevent abrasion, explosions, or corrosion.

The exhauster is the source of motion of the air into the hoods and through the ductwork and collector. While fans are the most common type of exhauster, air-stream, or water-operated ejectors are found to be very practical, particularly in plants manufacturing explosives. Propeller-type fans may prove satisfactory in low-velocity systems, but for the usual high-resistance, high velocity system, centrifugal-type fans are necessary.

*Respiratory Protection.* — It is generally agreed that in the control of exposure to an airborn toxic material, primary consideration should be given to procedures for preventing excessive contamination of the air in the breathing zone. However, there will always be situations where these procedures will be inapplicable, impracticable, or at times not effective. For these situations, personal respiratory protection will be required, either as a primary means of prevention or as an adjunct to other prevention procedures. Personal protective devices include gas masks, supplied air respirators, and chemical cartridge respirators. In recent years, great strides have been made in the improvement of respiratory protective devices and at present the U. S. Bureau of Mines has undertaken the approval of devices on the market. Such an approval system has stimulated further research on the part of the manufacturers handling these devices, which has resulted in a better product.

## PLANT SANTITATION

While atmospheric santitation, that is, maintaining the air breathed by the workers free from harmful concentrations of dusts, fumes, mists, gases and vapors, is a primary function of the industrial hygienist, we should not overlook the importance of accident prevention and plant sanitation.

Safety engineering is a well developed field in its own right, and no attempt will be made to cover this field in this discussion. However, it should be remembered that industrial accidents cause more lost time due to death and disability than do industrial diseases.

Plant sanitation and atmospheric sanitation are supplementary since good plant santitation is essential to good atmospheric santitation and vice versa. While atmospheric santitation is primarily directed toward occupational disease prevention, and plant sanitation is most important in the prevention of communicable diseases, the objective of reducing illness, and thereby reducing lost time and lost production, is the same in both cases.

Three important steps must be taken to obtain satisfactory plant sanitation:

(1) Provide good facilities and equipment.

(2) Keep these facilities clean and in good working condition.

(3) Educate the workers in the proper use of the facilities and in the need for good personal cleanliness. While it is sometimes necessary to supplement education with strict supervision to accomplish satisfactory results, compulsion alone seldom produces the desired results.

Plant sanitation includes the control of several factors of which the most important are:

(1) water supply
(2) waste disposal
(3) washing facilities
(4) toilet facilities
(5) personal services
(6) housekeeping
(7) environmental conditions

*Water Supply.* — 1. Provide a supply of clean, cool, wholesome, and safe drinking water, approved by the local authorities having jurisdiction, in all places of employment.

2. Drinking water should be supplied at a temperature between 40°F. and 80°F. (preferably between 45° and 50°F.). If cooled by ice, the ice should not come in direct contact with the water.

3. Where sanitary drinking fountains are provided, they should be of an approved type and construction. At least one drinking fountain should be provided for each 50 employees. (Spec. for Drinking Fountains. ASA Code Z4.2 — 1942).

4. The common drinking cup should be prohibited. Where individual, single-use, drinking cups are supplied, a suitable container for the unused cups and a receptacle for the disposal of used cups should be provided.

5. Open containers for drinking water from which the water must be dipped or poured should not be allowed, even if fitted with covers.

6. Wherever water from an unapproved source is used for industrial processes or fire protection, notices should be posted at all outlets stating clearly that such water is *unsafe* for human consumption, and every reasonable effort should be made to prevent its being so used.

*Waste Disposal.* — 1. In all places of employment, waste receptacles of a type which can be kept clean and sanitary should be provided and located convenient to the majority of workers.

2. An adequate number of waste receptacles of a type suitable for the purpose should be provided in and near all eating places, including lunchrooms and canteens.

3. Waste receptacles containing material which will attract flies should be covered.

4. All waste receptacles should be emptied and cleaned as often as is necessary to maintain them in a santitary condition.

5. All waste should be collected routinely and disposed of in a manner approved by the State Health Department.

6. Sewage should be disposed of in a manner approved by the State Health Department.

*Washing Facilities.* — 1. Adequate facilities for maintaining personal cleanliness should be provided in every place of employment and should be maintained in a sanitary condition throughout. Separate washrooms should be provided for each sex.

2. At least one lavatory with adequate water supply should be provided for every 10 employees up to 100 persons, and one lavatory for each additional 15 employees. Twenty-four inches of sink with individual faucet may be considered equal to one basin. At least one wash basin should be provided in each toilet room, or a room adjacent thereto, unless general washing facilities are on the same floor and near to the toilet room.

3. Every new wash basin installed should be made of vitreous, glazed, or enameled ware or similiar material. Galvanized cast iron may be permitted for sinks.

4. One wash basin with hot and cold water from one faucet should be provided for every 5 employees and one shower with hot and cold water from one fixture for every 15 employees exposed to skin contamination with poisonous, infectuous, or irritating material. For materials difficult to remove from the skin such as tetryl and TNT, the number of showers should be doubled.

5. *The common towel is prohibited.* Individual towels of cloth or paper and proper receptacles for disposing of used towels should be provided.

6. *Soap* in a suitable dispenser should be provided at each wash place. No strong alkali or harsh soaps should be permitted.

7. Oils or solvents used for removing contaminants from skin should be used sparingly.

8. Water used for washing should be approved by the State or local health authorities.

*Toilet Facilities.* — 1. Every place of employment should be provided with adequate water closets, chemical closets, or privies separated for each sex, in accordance with Table III.

TABLE III
TOILET FACILITIES RECOMMENDED

| Number of Persons Employed | Minimum Number of Toilet Facilities |
|---|---|
| 1 to 9 | 1 |
| 10 to 24 | 2 |
| 25 to 49 | 3 |
| 50 to 100 | 5 |
| Over 100 | 1 for each additional 30 persons. |

The number of persons is the maximum number of each sex employed at any time on the premises for which facilities are furnished.

2. Chemical closets and privies should not be permitted except where no sewer is acccessible and only when they can be kept under careful supervision.

3. All chemical closets should be of a type approved by the health authorities having jurisdiction and should be maintained in a sanitary condition.

4. Privies should not be permitted in establishments employing more than 25 persons. All privies should be constructed and maintained in accordance with the recommendations of the U. S. Public Health Service (The Sanitary Privy. Supplement No. 108. U. S. Public Health Reports, 1933).

5. Covered receptacles should be kept in all toilet rooms used by females.

6. An adequate supply of toilet paper, in proper holders, should be provided in each toilet room.

7. Adequate washing facilities should be provided in or adjacent to every toilet room.

8. Toilet rooms should be not more than one floor above or below the regular place of work unless passenger elevators are available.

9. Whenever urinals are provided, one closet less than the number specified in the above table may be provided for males for each urinal, except that the number of closets in such cases may not be reduced to less than two-thirds the number specified in the table.

10. The walls of compartments or partitions between fixtures may be less than the height of room walls but the top should be not less than 5 feet from the floor and the bottom not more than one foot from the floor. Compartment doors should have latches.

11. Toilet rooms should be fitted with self-closing doors screened from the workroom. Floors and walls to a height of 6 inches should be constructed of material impervious and resistant to moisture. Floors, walls, and ceilings should be of materials easy to clean. Windows should be translucent and screened.

12. Table IV shows the desirable space allotment for toilet facilities (closets), lavatories (wash basins), and urinals.

TABLE IV

SPACE ALLOTMENT FOR TOILET FACILITIES

| Installation | Minimum Width (Inches) | Minimum Depth (Feet) | Minimum Floor Space (Square Feet) |
|---|---|---|---|
| Closets | 32 | 3.6 | 16 |
| Lavatories | 24 | 3.6 | 12 |
| Urinals | 24 | 3.6 | 12 |

13. The construction and maintenance of toilet fixtures should comply with State or local building and plumbing codes, where such codes exist. In other cases it is recommended that the recommendations of the Women's Bureau, U. S. Department of Labor, be followed (The Installation and Maintenance of Toilet Facilities in Places of Employment. Bulletin No. 99).

*Personal Services.* — 1. In all places of employment where it is necessary for male employees to change clothes or where females are employed, seperate dressing rooms with lockers should be provided and maintained in sanitary conditions.

2. Dressing rooms should be provided for men (or women) whenever the type of work performed involves exposure to excessive dust, dirt, heat, fumes, vapor, or moisture of such degree as is declared by the enforcing authority to require the same. Separate ventilated lockers or compartments should be provided for street and work clothes. Workers exposed to toxic substances, such as TNT and tetryl, should be required to change clothes completely and to take a shower bath at the end of each shift. The work clothes should be provided and laundered by the employer.

3. A retiring room should be provided in every workplace where 10 or more women are employed. Where less than 10 women are employed and a retiring room is not furnished, some equivalent space should be provided which can be screened properly and made suitable for use by women employees. The minimum space provided for a retiring room for 10 women should be 60 square feet. For each additional female employee there should be at least two square feet of floor space. At least one couch or bed should be provided in every place where more than 10 women are employed. The number of beds or couches required is shown in Table V.

TABLE V

BEDS FOR FEMALE EMPLOYEES

| Number of Females Employed | Number of Beds |
|---|---|
| 10 to 100 | 1 |
| 100 to 250 | 2 |
| Over 250 | 1 Additional bed for each 250 additional women. |

4. A separate lunchroom should be maintained in every establishment unless it is convenient for the empolyees to eat lunch away from the premises. No employee should be permitted to eat lunch at their place of work or in the workroom. At least one-half hour should be allowed each employee for lunch. Table VI shows the area required per person based on the maximum number of persons using the lunchroom at one time.

TABLE VI

LUNCHROOM AREAS RECOMMENDED

| Number of Persons | Square Feet Per Person |
|---|---|
| Less than 25 | 8 |
| 25 to 74 | 7 |
| 75 to 149 | 6 |
| 150 to 499 | 5 |
| 500 or more | 4 |

*Housekeeping.* — 1. All places of employment, passageways, storerooms, and service rooms should be kept in a sanitary condition and the premises including the yards, courts, passages, and alleys connected with the place of employment should be kept free from any accumulation of dirt, filth, rubbish, or garbage.

2. The floor of every workroom should be maintained in a clean and, so far as possible, a

dry condition. Where wet processes are used, reasonable drainage should be maintained and false floors, platforms, mats, or other dry standing places should be provided. The employer should, without expense to the employees furnish proper boots or shoes for the use of the employees while at work in such places.

3. Floor and other walkway surfaces should be kept in good repair, and free from oil, water, protruding nails, splinters, holes, and loose boards.

4. So far as practicable, sweeping and cleaning should be done outside of working hours and in such manner as to avoid the dissemination of dust. All sweepings, waste, refuse, and garbage should be removed as often as necessary to maintain the place of employment in a sanitary condition.

5. Expectorating upon the walls, floors, stairs, or equipment should be prohibited. Where cuspidors are needed, they should be of the paper disposable type or should be cleaned daily.

6. Wherever mechanical or chemical equipment is used to maintain sanitation, periodic inspection is required to assure the efficiency of such equipment and a record should be kept of the results of each inspection.

7. Materials should be kept in shelves, bins, or lockers or should be piled neatly and safely in appropriate places.

*Environmental Conditions.* — In addition to the atmospheric control of toxic materials it should be remembered that atmospheric conditions must be kept within certain well established limits in order to assure comfort and good health. The environmental factors following in this sphere of the industrial hygiene engineer are temperature control, humidity control, ventilation requirements, illumination requirements, and the control of noise and vibration. While time does no permit a detailed discussion of these factors, their importance is, I believe, self-evident.

## MAINTENANCE OF A CONTROL PROGRAM

The purchasing and installing of good, carefully designed control equipment is only the first step in an effective control program. Even the best equipment will become inefficient in a comparatively short time unless it is maintained in good working condition. In fact, poorly maintained control equipment may be worse than no control equipment at all, since it gives a false sense of security and prevents the adoption of efficient control methods.

Maintenance is a cooperative duty of the employer and the employee. Management should provide trained personnel to inspect, clean, lubricate, and repair all control equipment routinely. The worker should learn to handle equipment properly and to report to management all signs of wear or failure.

Maintenance of control equipment must be supplemented by "good housekeeping" to produce safe working conditions. This is particularly important with respect to the control of dusts and fumes. Particulate matter settles out of the air on floors, ledges, machinery, and other objects. The starting of a machine or a sudden air current will dislodge and redisperse this material into the air, resulting in needlessly increased atmospheric contamination.

Good housecleaning should include frequent and routine cleaning of all exposed surfaces. This cleaning should be done by means of a suitable vacuum cleaning system or by wet sweeping methods; dry sweeping is very poor practice. Blowing the dust off machines and structural surfaces should be prohibited, since it is merely a means of recontaminating the air.

## STANDARDS

Today we are witnessing vigorous action on the part of many organizations in the development of codes and other regulations dealing with the removal of noxious air-borne materials and other environmental hazards in industry. Nonofficial agencies, such as the American Standards Association, and various medical and engineering organizations are collaborating with State and Federal agencies and industry towards the development of such codes on a scientific basis.

It is well known that in many industries health hazards are being effectively controlled. The engineer and the clinician should systematically evaluate the efficiency of the various methods employed so that the data would be available and useful in the preparation of good practice codes. With further reference to basic standards for the control of hazards in industry, two approaches may be employed.

Standards can be based on clinical data, that is, on definite knowledge which shows that ex-

posure to more than a certain amount of a toxic material will involve injury to health. Such knowledge then can be used in engineering design in order to reduce the exposure within the so-called threshold limit.

Although our knowledge concerning the toxicity of materials is rapidly becoming more and more abundant, there are still many substances for which we have no basic information at this time concerning their toxicological properties. In such cases, it is suggested that standards could be employed which are based on results which can be obtained by good engineering practices. Quite often these engineering practices are found to yield conditions far better than those which might be obtained if control design were based on our present knowledge of the toxicity of a material.

One must bear in mind that our present ideas concerning the toxic limits of certain substances are subject to change as our methods of diagnosis and analysis improve.

In closing, it is desired to emphasize that studies of the industrial environment necessitate numerous laboratory examinations of a clinical, physical, and chemical nature. These call for highly trained chemists and biochemists.

Today, with the added use of chemicals in many of our processes, there is a greater need for data concerning the toxic effects of these substances. The proper procedure is a study of these new materials or processes on a small scale prior to their widespread use in industry. This practice, which is now being employed in some of our more progressive industries, calls for a development departments in the plant, and the close collaboration between the production and industrial health maintenance service.

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## HEALTH ASPECTS OF FIBERGLAS*

The raw materials of which Fiberglas is made are selected sands and mineral oxides. The result of the fusion of these materials is true glass, which is then processed into a radically new form.

Chemically, Fiberglas is similar to other forms of mineral wool. It can properly be classified as a new, refined form of mineral wool. The fact that other forms of mineral wool (rock wool and slag wool) have been used for many years, in itself strongly suggests that there is nothing in the inherent chemical and physical characteristics of Fiberglas that is likely to introduce any serious occupational hazard.

Fiberglas contains no free silica; no free sodium silicate. No carcinogenic hydrocarbons or other hydrocarbons can be present because of the extremely high temperatures employed in fusing the raw materials. No harmful fumes can be given off, since no substances are present which will volatilize within the recommended service ranges.

Fiberglas — glass in the form of fine pliable glass fibers which can be woven into fabrics, or fabricated into bats and boards — was first produced in the wool form in 1932. During the succeeding years, as finer and stronger fibers have been produced, and as new uses for them have been found, Fiberglas in both its wool and textile forms has become a basic material of American industry.

In the electrical and heat insulation fields, in the field of air filtration, and in other fields as well, Fiberglas is employed in many different ways and forms, for many different purposes. Because of its widespread

*From a brochure prepared by the Owens-Corning Fiberglas Corporation, Toledo, Ohio. 1943.

use, and because it is a new material, it is to be expected that questions should arise from time to time concerning the possibility of health hazards in connection with its manufacture and handling.

Still another reason for such questions lies in the very fact that Fiberglas is glass. It is glass in an entirely new physical form. Its physical properties make it unrecognizable as glass by persons familiar with glass only as a hard, unbendable, transparent substance. Nevertheless, the complete transformation that Fiberglas has undergone is not always understood, and old connotations sometimes cling to the new material.

In an investigation of skin hazards in the manufacture of glass fiber insulating materials and glass fiber textiles, Dr. Louis Schwartz, medical director, and Dr. Isadore Botvinick, P. A. Surgeon of the Division of Industrial Health, National Institute of Health, United States Public Health Service, reported the following:

"The hazards to workmen using glass wool products for insulation and for other purposes are those due to abrasions by slugs in the glass wool. A few may develop allergic dermatitis from contact with improperly cured binders. If such workers wear leather gloves, impervious sleeves, and aprons, they will be afforded adequate protection against these hazards.

"Workers handling glass fiber in textile manufacturing may develop dermatitis from the mechanical cutting action of the fibers on the skin, and a small percentage of them may develop an allergic dermatitis from the binder. Irritation of the arms, neck, chest, and other parts of the body may be prevented by wearing impervious sleeves and aprons. Irritation of the nasal mucosa may be prevented by inserting a bland grease into the nostrils two or three times a day.

"According to an official of the company, the incidence of dermatitis in this plant was low, being in the order of 1% of the workers employed. No compensation cases have developed, indicating that the dermatitis is not severe. Some new employees experience sensitivity to handling the glass fibers for a few days and may wear gloves or protective clothing at first, but an immunity seems to develop quickly so that the great majority of experienced workers prefer to work without gloves or special clothing. Exceptions are found among employees handling hot equipment, coarse filter fibers, metal lath, and other collateral materials of like nature. In the principal wool and textile departments, workers, according to management experience, report greater discomfort from gloves and protective clothing than from the material with which they work."

From time to time newly employed workers, unaccustomed to handling Fiberglas materials, have experienced a mechanical irritation of the skin. The period of discomfort has seldom exceeded a few days.

Manufacturing experience indicates that such irritation is minimized and the period of discomfort lessened when it occurs if workers wear clothing loose at the neck and wrists and *use plenty of warm water and soap when the day's work is done.* The use of a soap containing a wetting agent is helpful. Mechanical irritants of the skin, which new employees may suffer occasionally, is usually relieved by applying calomine lotion containing one per cent phenol for a few days, after which time the irritation usually disappears. Companies engaged in the manufacture of Fiberglas seldom, if ever, find any need for gloves, gauntlets or other protective clothing.

Tests conducted by Dr. Leroy U. Gardner, Director of the Edward L. Trudeau Foundation for Research and Teaching in Tuberculosis, have demonstrated that Fiberglass has no injurious effect upon the lungs.

In the annual report of the Foundation's Saranac Laboratory, for the year 1940, the following statement appears:

"The apparent lack of pulmonary damage from exposure to glass wool dust is being demonstrated by an inhalation experiment. For over a year animals have now been exposed to as high a concentration of this material as could be obtained, with no serious effect upon their lungs. The dust has been produced by breaking into short lengths the finest textile glass (Fiberglas) that is made, but none of the fibers that are floating in the air can be found in the lungs of the exposed animals. Their tendency, unlike that of asbestos, to form felt-like masses upon any object with which they come in contact, probably prevents their inhalation. Slight amounts of chronic inflammation similar to those observed with other harmless dusts, have resulted from accumulated particulate debris. These very fine, non-fibrous particles are the by-product of the violent beating used to break up the material."

In his 1941 report as director of the Trudeau Foundation, Dr. Gardner says:

"Exposure to the dust of glass wool, a material commonly used to insulate buildings, involves no hazard for the lungs because this fibrous material is not inhalable."

In Ohio during the first nine years of manufacture of Fiberglas products, there was no claim filed for upper respiratory infections caused by the alleged inhalation of Fiberglas particles. Respirators do not appear to be mandatory although it is considered good practice to provide them for workers who are exposed temporarily to excessive quantities of any kind of dust, or for those who are sensitive to certain dusts. It appears that the silicates of which glass wool is composed will not produce silicosis or a similar glass condition.

# News of the State

## PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

J. P. Greenhill of Chicago read a paper before the Brooklyn Gynecological Society on "Personal Recollections of Dr. Joseph B. DeLee", May 5th.

George T. Jordan, Professor of the ear, nose and throat department of Loyola University medical school was guest at a farewell dinner on May 13th at the Morrison Hotel, Chicago. He is retiring after 40 years of practice in Chicago to return to his former home in Vermillion, South Dakota.

Italo F. Volini has just been appointed dean of the Loyola University School of Medicine for the duration of the war, to take the place of Cmdr. Francis J. Braceland, now on leave of absence with the Navy. Dr. Volini is President of the Chicago Society of Internal Medicine and an executive board member of the Chicago Heart Association.

Col. Carl F. Steinhoff of 6207 N. Artesian Avenue who has been stationed in Australia for the last two years and is serving in an advisory capacity to several army hospitals, was recently sketched by Gary Sheahan, Tribune staff artist. The sketch appeared in the April 30th Chicago Tribune.

Dr. George L. Drennan of Jacksonville, pediatrician and physician for the Illinois State School for the Deaf, now on leave of absence, who is in the United States Navy has been promoted from the rank of Lieutenant-Commander to that of Commander. He is now at the Navy Air Technical Training Center at Norman, Oklahoma.

H. Prather Saunders, a Past President of the Chicago Medical Society, has been promoted to a full Commander in the Navy. His address is USS Sierra, Fleet Post Office, New York, N. Y.

Dr. Max Thorek, was the guest speaker at the Wartime Graduate Medical Meeting at the Schick General Hospital, Clinton, Iowa on May 26th. His subjects were: 1. Electro-Surgical Obliteration of the Gall Bladder. 2. The History and Practical uses of Tubo-Valvular Gastrostomy.

The Chicago Society of Allergy has elected the following officers for the coming year: President, L. E. Markin; President-Elect, John Peters; Secretary-Treasurer, Helen C. Hayden.

The Chicago Roentgen Society has elected the following officers for the coming year: President, Warren W. Furey; Vice-President, T. J. Wachowski; Secretary-Treasurer, Fay H. Squire; Trustees, Earl E. Barth, Frank L. Hussey and Benjamin D. Braun.

The Geneva Community Hospital Staff at Geneva, Illinois has had the following speakers in the last two months: Isaac Abt on "Pediatric Problems;" Paul Rhoads on "Contagious Diseases;" Philip Schneider on "Obstetrics, Gynecology and Related Endocrinology."

Lt. Col. Sarkis D. Sarkissian, M. C. of 6950 Jeffrey Avenue, Chicago is now a flight surgeon at an air service command station somewhere in England. With the staff of medical officers and men under his command he is directly responsible for the physical condition and health protection of the Air Force men in this command.

Victor A. McClanahan of Aledo was honored at a dinner May 10th sponsored by the Mercer County Medical Society. He was awarded the fifty year button of the Illinois State Medical Society. Doctor McClanahan has been coroner for the past twelve years, the first coroner in the county to be honored by holding this office four consecutive terms. He is also serving Mer-

cer County as medical examiner under the selective service act. The dinner was attended by leaders of the community, doctors of Mercer County and from adjoining counties of Illinois and Iowa.

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Capt. David A. Herstein of the medical corps has just returned to Chicago after 14 months in the Mediterranean theater. He was on a British hospital ship which was bombed at night after evacuating hundreds of American wounded from the Anzio beachhead. He explained "It's amazing the way our boys can stand these terrible injuries. Even when they undergo the most serious operations, the soldiers hang on to their sense of humor and wisecrack with the surgeons. They just seem to take their injuries in stride."

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Frank E. Nagel, M.D. (Univ. of Illinois '29) who practiced at 1407 Addison Street, Chicago and who is now a Lieutenant Commander, M. C. USNR, with a "Sea Bee" unit in the Solomons was cited for bravery as follows "for leaving the security of his fox hole and giving aid to the injured while shells were falling in the immediate neighborhood, his action undoubtedly resulting in the saving of several lives."

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Lt. Colonel L. E. Robinson, former Aledo physician and surgeon, who has been in army service since November 1, 1940 recently returned to the United States after three years of service in the Pacific War Zone. He has been in the thick of heavy fighting much of the time and has been awarded the Silver Star for bravery in the evacuation of troops from Java.

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A dinner meeting of Washington County Medical Society was held at the home of Dr. G. A. Green in Nashville, Illinois, April 30th in honor of Dr. James McIlwain of Okawville. Dr. McIlwain was also elected to Emeritus Membership in Washington County Medical Society. He was present at the first organization meeting of Washington County Medical Society, November 29th, 1902 and has been a member ever since. Dr. Andy Hall of Mt. Vernon presented the framed certificate and gold emblem of the 50 Year Club to Dr. McIlwain.

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## DEATHS

Henry A. Aschauer, Springfield; University of Illinois College of Medicine, 1909. Was member of the Knights of Columbus, Fourth degree, and the Elks. Died suddenly of a heart attack April 10, 1944 at the age of 62.

Fred A. Bartlett, Aurora; Hahnemann Medical College and Hospital, Chicago, 1897. Life-long resident of Aurora. Died April 26, 1944 at the age of 67.

Edgar S. Bell, Chicago; Rush Medical College, 1896. Died April 17, 1944 at the age of 75.

George N. Bussey, Chicago; Rush Medical College, 1893. Had practiced medicine in Ravenswood for half a century and helped to found Ravenswood Hospital. Died May 1, 1944 at the age of 81 years.

Edward F. Cummiskey, Wilmette; Georgetown University, Washington, D.C., 1896. Medical Director of Zurich General Accident and Liability Insurance Company for 28 years. Died May 1, 1944 at the age of 70.

Albert E. Fritze, Chester; Homeopathic Medical College of Missouri, St. Louis, 1885. Member of the 50-Year Club of Illinois State Medical Society. Died April 6, 1944 at the age of 82.

Alton James Higgins, Elgin; Illinois Medical College, 1908. Practiced in Elgin for 24 years. Died April 3, 1944 at the age of 73.

John Allen McGee, Virginia; Hahnemann Medical College & Hospital, Chicago. Served on staffs of Beardstown and Jacksonville Hospitals. Died May 7, 1944 at the age of 71.

William Rankin Miller, Danville; Western Pennsylvania Medical School, 1892. Had practiced medicine in Danville 27 years. Died April 5, 1944 at 77 years of age.

Landon C. Moore, Reynolds; Rush Medical College, 1886. Member of the 50-Year Club of the Illinois State Medical Society. Died April 10, 1944, aged 84.

Deno F. O'Commor, Chicago; Loyola University School of Medicine, 1917. Entered army in 1917 and went to Russia, returning two years later. Died of a heart ailment April 18, 1944 at the age of 52.

Daniel Joseph O'Loughlin, Kankakee; Northwestern University Medical School, 1905. Died of a heart attack May 8, 1944 at the age of 60.

Thomas F. X. Phelan, Chicago; Loyola University School of Medicine, 1917. Had practiced medicine in Chicago for 29 years. Died May 10, 1944 at the age of 57.

Daniel E. Ricardo, Chicago; University of Illinois College of Physicians and Surgeons, 1905. City health officer and professor of orthopedic surgery at the Chicago Hospital College of Medicine from 1906 to 1910. Died April 17, 1944 at the age of 70.

Monte Valient Robinson, Chicago; St. Louis College of Physicians and Surgeons, 1918. Died May 11, 1944, aged 59.

Cassius Clay Rogers, Chicago; Rush Medical College, 1896. On staff of Garfield Park and University Hospitals. Taught surgery of the brain and spinal

cord at the University of Illinois Medical School in 1920-27; department head of the Chicago College of Dental Surgery, a major and surgeon with the 1st Illinois reserve militia. Died April 21, 1944 at the age of 74.

William Daniel Snively, Rock Island; University of Pennsylvania School of Medicine, 1903. Had practiced medicine in Rock Island for 40 years. Staff member at St. Anthony's Hospital, Rock Island, and at the Lutheran and Public Hospitals in Moline; instructor in obstetrics at St. Anthony's Hospital school of nursing. Died April 5, 1944 at the age of 70.

Arthur Kern Spiering, Berwyn, Ill.; University of Illinois College of Medicine, Chicago, 1916; member of the Illinois State Medical Society; served on the staff of the West Suburban Hospital, Oak Park; died in Fond du Lac, Wis., February 2, aged 51, of heart disease.

John Lincoln Taylor, Libertyville; Rush Medical College, 1894. Coroner of Lake County for 43 years. Died May 5, 1944, aged 77 years.

Alonzo C. Tenney, Highland Park; Hahnemann Medical College, 1895. Former professor of physical diagnosis, Illinois Post-Graduate Medical School; former medical examiner state civil service; former president Chicago Radiological Association. Died of a heart attack May 8, 1944 at the age of 71.

Delos Ashely Turner, Maywood, Ill.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1901; served during World War I; formerly attached to the U. S. Veterans Bureau in Reno, Nev.; at one time county physician, Esmeralda County, Nev., and district health officer, Nevada State Board of Health; on the staff of the Veterans Administration Facility, Hines, where he died February 18, aged 66, of acute coronary thrombosis.

J. Louis Veit, Chicago; University of Illinois College of Physicians and Surgeons, 1895. Director of contagious diseases branch of the Board of Health for 30 years. Died May 19, 1944 at the age of 71.

## SAYS SULFAGUANIDINE APPEARS EFFECTIVE FOR ASIATIC CHOLERA

### Investigator At Kwangsi (China) Provincial Medical College Reports 21 Out Of 22 Persons Were Cured In A Short Time

Sulfaguanidine, a member of the sulfanilamide family of drugs, appears to be an effective treatment for Asiatic cholera, Joo-se Huang, M.B., Kweilin, Kwangsi, China, reports in *The Journal of the American Medical Association* for May 6.

In his report from the Department of Medicine, Kwangsi Provincial Medical College, the author says that he had decided to try sulfaguanidine for Asiatic cholera after noting its effectiveness in the treatment of several other intestinal infections.

"I was surprised to find sulfaguanidine efficacious in the first case of Asiatic cholera in which I administered it," he says. "At the same time I doubted whether my observation could be sufficiently adequate. After several experiments, however, I had to concede that sulfaguanidine could give an unexpected efficacy in Asiatic cholera and that an effective remedy had been found whereby our bitter enemy cholera, which had been killing a great many people in the world for many years, could eventually be subdued.

"Twenty-two patients with Asiatic cholera who had been treated with sulfaguanidine were observed. Most of them were laborers. . . ."

He notes that the patients improved three to four hours after taking the drug, and that eight hours after treatment culture studies were negative.

"Of the 22 patients," he says, "21 were cured in a short time and 1 died within seventy-three hours of being ill. The mortality rate of Asiatic cholera ranged from 20 to 60 per cent in various clinics, but under this treatment even without the injection of salt solution the death rate was remarkably reduced. On the other hand, of patients treated with earlier methods — injection of hypertonic salt solution, administration of kaolin, potassium permanganate and so on, the death rate is still as high as 26 per cent (according to the report of the Provincial Hospital of Kweilin in 1943). I fancy that the combined application of sulfaguanidine and salt solution injection will reduce the mortality to less than 5 per cent."

Treatment of the pregnant woman with tuberculosis by the most modern methods of combating the disease together with equally modern prenatal care apparently offers her as good a chance for recovery from her tuberculosis as though pregnancy did not exist. E. S. Mariette, M.D. et al. Trans. Nat. Tbc. Assn., 1941.

—NTA CLIP SHEET

# P. R. N.

The Jocular Jingles of C. G. F.

by

Charles G. Farnum M. D.

Peoria, Ill.

## THE THIN PARTITION

Not long ago, as a matter of variety,
The Medical Staff of the Peoria State Hospital entertained our local Medical Society,
And gave us most learned diagnoses
Of various types of psychoses.
They demonstrated cases with much wisdom and erudition
From a group of patients on the other side of a glass partition.
They discussed behavioristic tendencies and emotional exteriorization
Depressio-apathetica and symbolization,
Split consciousness and dissociation,
Plateau speech, pseudolalia and verbigeration,
Autistic tendencies, distractability, illusions,
Confusional states and delusions.
Antero-grade amnesia and neurasthenia,
Hypochondriacal tendencies and hebephrenia,
Emotional leveling, depersonalization,
Ideational inertia and disorientation,
Schizophrenia, introversion psychosis,
Somnolence and various types of neurosis,
Thought retardation, cataleptic negativism,
Ego-centric paranoia and superlative egotism,
Flight of ideas, neologisms,
Paraphrenical expansiva, automatisms,
Amentia, hallucinations,
Secondary elaborations,
Anergia, euphoria,
Lethargy, delayed cerebration, melancholia,
Ideo — motor — apraxia,
Insomnia, repressions, echopraxia,
Asymboly, neurodynamia, faulty cognition,
Paramnesia and psycho — motor — retardation.
All of which was so lucid and comprehensible
That I began to wonder if anyone is wholly sane and sensible.
Cogitating upon the above symptoms and signs
Which pertain to persons within psychiatric confines,
I cautiously took
An appraising look
At myself and my colleagues assembled
And was amazed at how each the other resembled,
For, as I applied to ourselves these same symptoms that belong to the patients gathered within,
About the only thing that seemed to separate us was the glass partition and that partition seemed woefully thin.

## OBESITY.

**There's a question I'd like to profound;**
**Why's the good natured man so round?**
**Is he round because he's good natured**
**Or good natured because he's round?**
**Why is a merry man always fat?**
**Just find me an answer to that.**
**Is he fat because he is merry,**
**Or is merry because he's fat?**
**But the answer is simple very,**
**As to why a fat man's merry.**
**He is fat because he's a fat man**
**And merry because he's merry.**

## I THINK OF THEE.

I think of Thee
Beneath the heavenly vault
Of peaceful night,
There shine a million stars
And silvery moon.
I see them not.
I think of Thee!

I think of Thee
In gleaming, golden sun
From azure sky.
The gaily singing birds
And gorgeous flowers
Attract me not.
I think of Thee!

I think of Thee
In raucous, milling crowds
Of harried folks,
Mid din and noise of streets
That drive me mad.
I hear it not.
I think of Thee!

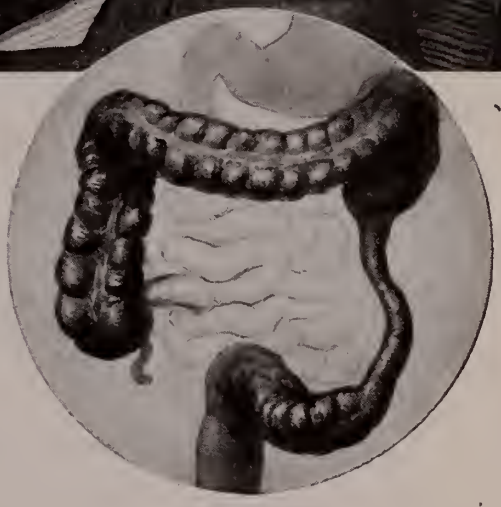
I think of Thee
All through the long, long night.
When others rest
Secure in Morpheus' arms
I find no peace.
I cannot sleep.
I think of Thee!

I think of Thee
Throughout an endless chain
Of bitter hours
From which no respite comes.
All else forgot,
O, Abscessed Tooth,
I think of Thee!

*Nurse in a car going like blazes,*
*Tickled all over at the dust she raises.*
*Lets go the wheel, to fumble in her purse,*
*To take out her powder puff. Good night, nurse!*



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Old people who eat little and lead quiet, inactive lives tend to become constipated. Restoration and maintenance of "habit time" is of prime importance to the patient's well-being.

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*WOLDMAN, E. E., and POLAN, C. C.: The Value of Colloidal Aluminum Hydroxide in the Treatment of Peptic Ulcer: A Review of 407 Consecutive Cases, Am. J. M. Sc. **198**: 155-164 (Aug.) 1939.




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# Book Reviews

FEMALE ENDOCRINOLOGY, by Jacob Hoffman, M.D., 788 pages with 180 illustrations, including some in colors. Philadelphia and London: W. B. Saunders Company, 1944. Price $10.00.

This book is divided into 41 chapters and, as the title indicates, deals largely with endocrinology of the female and her genital apparatus. Perhaps this is unavoidable from the standpoint of the gynecologist. However, it should be remembered that the female experiences many endocrine disorders that differ little if any from involvement of the same glands in the male. Pituitary disorders even when they do not involve the menstrual or reproductive functions of the female are extremely common, but they are given scant attention by the author.

The book is well written and shows the wide acquaintance of the author with endocrine literature. The text goes too extensively into subjects often experimental where various groups of workers have not agreed in their findings or their interpretations so that the average reader will still be confused. For the average practitioner, particularly in these busy times, it would probably have been better if the facts could have been more briefly stated and the interested readers then referred to the original source material by bibliographical references. For the endocrinologist, particularly one engaged in research or institutional work, the resumes of the literature should be very helpful. For the busy man engaged in private practice, significant clinical facts are too much diluted with descriptions of laboratory experimentation. One of the reasons why the profession is slow to recognize the general truth that endocrine disorders are common and widespread and also fails to recognize specific endocrinopathies when confronted by them is the inability or unwillingness of endocrinologists to produce a literature that deals with clinical ideas, facts, observations and laboratory procedures which are available to the mass of the medical profession.

The chapters devoted to diagnostic aids are very well done and should be a valuable addition to any man's library. The chapter devoted to endocrine preparations is also well done and should be helpful to the man in active practice.

The author is to be commended for the enormous amount of work he has done in compiling this book. The criticisms already cited might be directed at endocrine literature in general because it still deals too largely with the laboratory, chemical and animal. J.H.H.

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PERSONAL AND COMMUNITY HYGIENE by C. E. Turner, Sc. D., Dr. P. H. Professor of Public Health Massachusetts Institute of Technology 7th Edition — C. V. Mosby Co., St. Louis, Missouri. Price — $3.50

This is the 7th edition of a textbook which has for many years filled a genuine need in the collegiate field. This text has been thoroughly revised and brought up to date by the addition of much information relative to recent developments in the several fields covered.

The first 19 chapters are devoted to concise information relative to desirable personal health habits and the functions of the systems of the body. The second portion of the book consisting of 12 chapters is devoted to community hygiene. These effectively chapters portray the science of

(*Continued on page* 38)

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BOOK REVIEWS (Continued)

disease prevention through immunological methods and the sanitation of the environment. Several chapters are devoted to Public Health programs which are carried out by whole-time health departments. These include the control of communicable disease, maternal and child hygiene, school hygiene, and environmental sanitation.

In the appendix is reproduced the concise information regarding the control of communicable disease contained in the 1943 report of the Subcommittee on the Control of Communicable Disease of the American Public Health Association. The index also contains pertinent information regarding disinfection.

Well selected and attractive photographs add materially to the interest of the subject matter presented as does the presence of four color plates.

This book will continue to provide authoritative information relative to personal and community health problems for students at the college level. R. F. B.

---

An Atlas of Anatomy: In Two Volumes. J. C. Boileau Grant, M.C., Ch.B., M.B., F.R.C.S. (Edin.) Professor of Anatomy in the University of Toronto. Volume II Vertebrae and Vertebral Column, Thorax, Head and Neck. A William Wood Book. The Williams and Wilkins Company. Baltimore, 1943. Price $5.00.

The first volume of this fine Atlas of Anatomy was published less than one year ago, and covered the upper limb, abdomen, perineum, pelvis and lower limb.

This second volume depicts the structures of the human body in a manner similar to that used in developing the first volume, and covers the vertebrae, vertebral column, thorax, head and neck. As was stated in the review of the first volume, the reviewer knows of no other book in which so much information appears, thus making it unnecessary to go through two or more works on anatomy to get the sum total of the desired information.

This volume has 232 illustrations, many in color, and each made with the most meticulous technic to give the best possible accuracy of de-

(*Continued on page* 40)

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BOOK REVIEWS (Continued)

tail. Beginning with the vertebrae, interesting anomalies are presented, some shown as individual specimens while others are shown as a part of the vertebral column as a whole. Some interesting information can be procured by those using caudal anesthesia, to aid in developing their technique, and to show that all sacrums are not normal. Likewise much information is given to those desiring data relative to intervertebral discs and protruding nucleus pulposis.

Going through the volume one will note the same careful consideration given to structures within the thorax, head and neck. One will notice for example, in the fine illustrations of the heart, that several varieties of coronary circulation are pictured as well as the normal type. Likewise variations in origin of the branches of the aortic arch are pictured. It will be noticed in this volume that the normal as well as variations in the many structures of the human body are well presented.

This volume as well as the first volume of this interesting atlas of anatomy, should be in all modern medical libraries. It is the opinion of the reviewer that it should be available to all practitioners of medicine who will find use for the volumes and will refer to them often in their leisure moments.

---

ORAL HISTOLOGY AND EMBRYOLOGY: Edited by Balint Orban, Foundation for Dental Research of the Chicago College of Dental Surgery, School of Dentistry, Loyola University. With 262 Test Illustrations Including Four Color Plates. The C. V. Mosby Company, St. Louis. 1944. Price $6.50.

Many additions have been made in recent years to the knowledge concerning oral histology and embryology. There have been widely divergent interpretations of this information. This book is quite unique in that a total of nineteen contributors were selected to develop it, each assigned definite subjects, and each manuscript was submitted to each of the other contributors for discussion. Although a few did not present manuscripts, they did review all material submitted, and they participated in the discussions which eventually led to the selection of the material believed to be the best adapted for the purpose.

(*Continued on page* 42)

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BOOK REVIEWS (Continued)

The editor was assigned the task of coordinating the various viewpoints which were presented, and publishing those which he deemed advisable. The completed volume consists of sixteen chapters dealing first, with the development of the face and oral cavity, development and growth of the teeth, enamel, dentin, pulp, cementum, eruption of the teeth, and a number of other equally interesting and essential subjects.

Histological and embryological information concerning each of these subjects will be found in this chapter.

The book should be of especial interest to the up to date dentist and likewise to the oral surgeon, both of whom will find much information which he will no doubt be seeking quite frequently indeed.

---

Oral Pathology. A Histological, Roentgenological, and Clinical Study of the Diseases of the Teeth, Jaws, and Mouth; By Kurt H. Thoma, D.M.D., Professor of Oral Surgery and Brackett Professor of Oral Pathology, Harvard University; Oral Surgeon and Chief of Dental Service, Massachusetts General Hospital; Oral Surgeon to Brooks Hospital; Dental Surgeon to Dental Department and Consultant in Oral Surgery to Tumor Department, Boston Dispensary and Joseph H. Pratt Diagnostic Clinic; Consulting Oral Surgeon, New England Baptist Hospital; Consulting Oral Surgeon, Beth Israel Hospital. Second Edition. With 1388 Illustrations Including 128 in Color. The C. V. Mosby Company, St. Louis, 1944. Price $15.00.

The first volume of Doctor Thoma's book, appearing some two years ago, was highly popular among not only oral surgeons, but also among many men in special and general types of work. With the many advancements in this, as well as all other medical subjects during the past few years, it was deemed advisable to produce this, the second edition.

Undoubtedly the outstanding book of its type ever published, this volume has been changed materially with many fine illustrations, many of which are in color, and all of them adding materially to the value of the book.

There is much information here for many physicians who do not attempt to pose as oral surgeons, but who frequently are the first to see many of the lesions which are described in much

(*Continued on page* 44)

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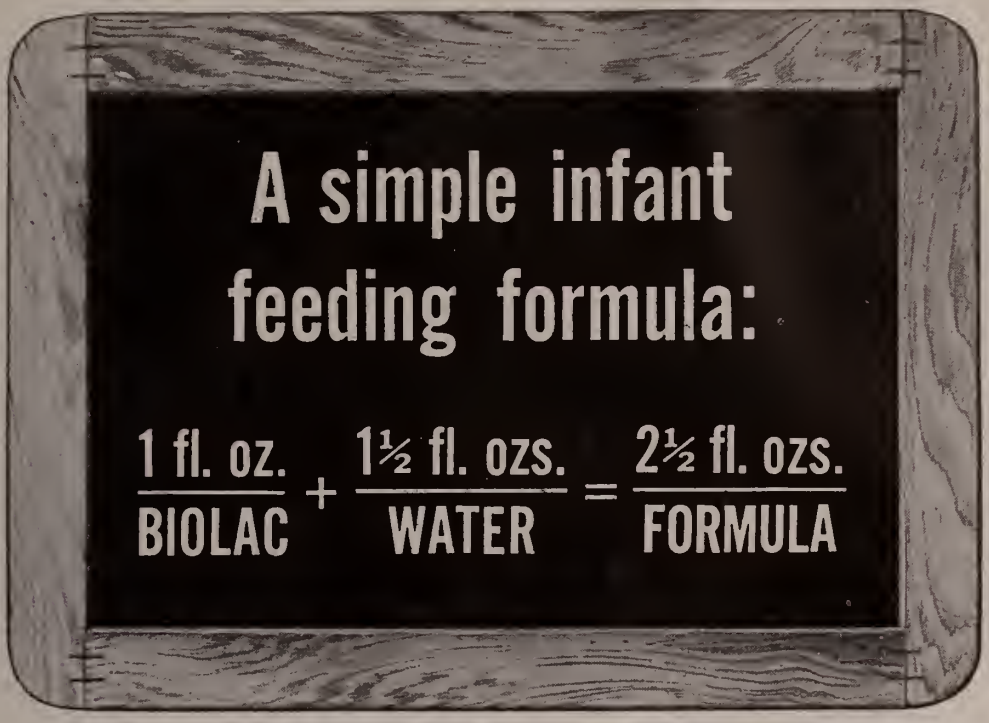
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BOOK REVIEWS (Continued)

detail. Dentistry well recognizes the necessity for the practitioner to have more information concerning the basic principles of the science as a foundation for clinical advancement. Like members of the medical profession in consideration of many types of ailments being seen at this time, it is essential that the practitioner in both professions acquire definite knowledge concerning disease processes and their many causes. Likewise the necessity for differentiating the normal and the abnormal tissues, is quite obvious.

The book, therefore, should be of inestimable value to many members of both the dental and medical professions — to all men in the first and many in the second of these closely allied professions, with no actual line of demarcation between the two branches.

The author is to be commended for bringing out the second, and considerably revised volume of a truly scholarly book under trying wartime conditions.

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MEDICAL RADIOGRAPHIC TECHNIC: Prepared by The Technical Service Department of General Electric X-Ray Corporation under the editorial supervision of Glenn W. Files, Director. Charles C. Thomas, Publishers. Springfield, Illinois and Baltimore, Maryland, 1943. Price $6.00.

This book "written by technicians for technicians" was prepared by members of the Technical Service of General Electric X-Ray Corporation under the editorial supervision of Glenn W. Files, Director. In the preface it is stated that the book is somewhat like Topsy: "it just grew up," for in the beginning, members of the technical service department wanted a handbook for their own guidance in formulating standard methods of teaching x-ray operative procedure. As the information was gradually developed it was decided rather than to have a mere notebook with the various bits of information for instructors, it would be well to have these notes published in book form as a permanent record which would not only be of value to the teachers, but also to many others desiring

(*Continued on Page* 46)

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BOOK REVIEWS (Continued)

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The nature of the x-ray and the anatomy of the modern equipment are thoroughly integrated to give the novice clear and definite information as to their nature as well as value in his routine work. The chapter on antomy is quite replete with illustrations from actual skeletal material obtained largely from the Department of Anatomy of the Northwestern University Medical School. This is of much value to all technicians, as the illustrations are made with the idea in view of giving the necessary anatomical information generally required for x-ray technicians. Interesting chapters will be found on such subjects as planigraphy, stereoscopy, foreign body localization, fluoroscopy, dental technic, and a number of equally essential and interesting subjects which should be of inestimable value to the technician.

The book is well written, well arranged, and the 381 original figures have been so carefully prepared that they should be of much interest to the technician, the instructor, and to those whose knowledge of modern radiological procedure has been previously inadequate. It does deserve a place in the modern medical library and should by all means be made available for technicians.

---

Handbook of Tropical Medicine, Alfred C. Reed & J. C. Geiger, Stanford University Press, 1943. $1.50.

The authors point out aptly that there is a great need for a handy reference compendium of tropical medicine. This volume in its 182 pages of text discusses the more common tropical diseases. There is some detail relative to geo-

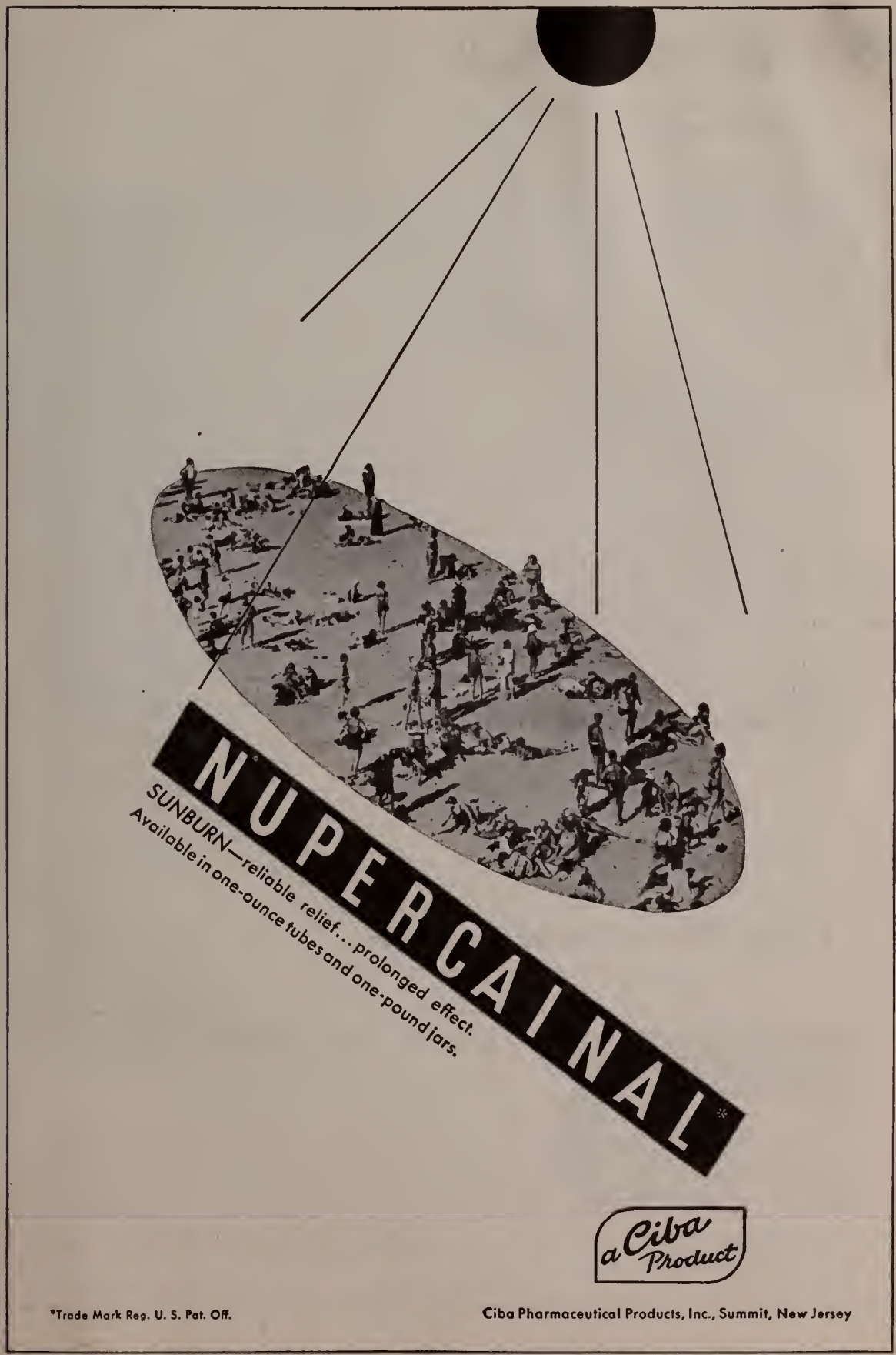
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## BOOK REVIEWS (Continued)

graphic distribution and only salient clinical manifestations are discussed. The presentation of the various simpler laboratory methods for confirmatory purposes is of value. In addition to the infectious processes, the effects of heat and vitamin dificiencies are included. The size of the book and character of its binding are such as to permit its use as a pocket field reference.

---

SYNOPSIS OF TROPICAL MEDICINE: Sir Philip Manson-Bahr, The Williams & Wilkins Co., Baltimore — 1943, $2.50.

This is a pocket size summary of tropical disease prepared in the main for use by the medical officer. It is written in outline form with brief but authentic and pithy discussion of distribution, etiology, pathology, clinical manifestations and treatment. The volume is a handy reference work but of necessity lacks the detail available in larger texts. The typography does not lend itself well to easy reading.

---

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## PRESENT EVIDENCE OF THE VALUE OF WHOOPING COUGH VACCINATION

### Study Made During An Epidemic In Iceland Shows The Effectiveness Of Prophylactic Measure, Three Investigators Report

Studies made in Iceland during an epidemic of whooping cough, where practically every child vaccinated was exposed to the disease, showed that vaccination is of undoubted value as a preventive measure, Niels Dungal, M.D., Skuli Thoroddsen and Hreidar Agustsson, of the Department of Pathology and Bacteriology, University of Iceland, Reykjavik, report in *The Journal of the American Medical Association* for May 20.

Dr. Dungal and his colleagues point out that in the medical literature on whooping cough vaccination it is difficult to attain an unbiased opinion as to the value of this prophylactic measure. On the one hand there are authors who report excellent results; on the other hand there are those who have only negative or doubtful effects to report.

"All these reports," they say, "have the same problem to face, which some authors try to solve, others not, namely the rate of exposure to infection after vaccination. In a community where whooping cough is always existent and flares up periodically, the rate of exposure among a great number of children must necessarily be difficult to grasp numerically. If the children are vaccinated between epidemics, months and years may pass before they are exposed to infection, and by that time the immunity once acquired may be greatly reduced or lost.

(*Continued on page 52*)

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WHOOPING COUGH (Continued)

"In Iceland conditions are different. Here whooping cough spreads as an epidemic all over the country, usually at intervals of about seven years, to die out completely when it has attacked practically all persons who either had not been born or had escaped exposure in former epidemics. This takes from six to twelve months, and then the disease is not seen for years in the whole country.

"In Iceland the rate of exposure is therefore not such an uncertain factor as in [some American] reports, for it can be safely assumed that practically every child born since the last epidemic has not been in touch with whooping cough and will be exposed during the next epidemic.

"Our difficulties are of another nature. When pertussis [whooping cough] once is introduced, it spreads like a fire, and everybody wants to have his children vaccinated at once. Our problem is therefore to be able to produce a great quantity of vaccine in the shortest time possible and have the children vaccinated as soon as possible after the first case appears. The demand for vaccine is so enormous, when everybody wants vaccine at once, that we have several times lagged behind in the production, which under such conditions is so strained that infection in one bottle of a prepared suspension may mean a serious delay in the rapidity with which the immunization is carried out. . . ."

They say that as soon as the germ of whooping cough had been isolated from the first patient in Reykjavik, who had doubtful clinical symptoms, the production of vaccine was started. Due to the difficult conditions under which they had to work, it was not possible to produce as strong a vaccine and administer it at the same intervals as is recommended in the United States. The period utilized in vaccinating each child was from twelve to twenty days, they say, explaining that "This is a much shorter time than most authors recommend, but we had no alternative, for we knew that within a month the disease would be all over Reykjavik and spreading out into the country. . . .

"Reactions from the vaccinations were negligible. A few children had a slight redness and even a perceptible swelling at the site of injec-


in whooping cough

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tion, but no major reaction was noted. . . ."

During the epidemic about 5,000 children were vaccinated in Reykjavik, of whom the investigators were able to trace and obtain what was considered reliable reports on 888.

"Of 888 children between 0 and 8 years vaccinated against whooping cough," the authors report, "28.3 per cent of 770 fully vaccinated got no pertussis, 49.5 per cent mild pertussis, 16.9 medium pertussis and 5.3 per cent grave pertussis. Of 122 unvaccinated controls the corresponding numbers were 4.9, 49.2, 34.4 and 11.5 per cent. Owing to special conditions in Iceland there could be no doubt about exposure after vaccination, as practically every child was exposed."

In their report, they say that "mild" means no paroxysms of coughing, "medium" five to ten attacks in twenty-four hours, and "grave" more than ten attacks in twenty-four hours or pneumonia. Among the unvaccinated children 3.3 per cent developed pneumonia, whereas in the vaccinated group the rate was 1.6 per cent.

Commenting on their study, they say that "The results would in all probability have been better if we had not been compelled by the situation to employ a comperatively weak vaccine in the shortest possible time. But in spite of this disadvantage they indicate clearly that vaccination is of undoubted value as a prophylactic measure against whooping cough."

## EXPECTATION OF LIFE

"The League of Nations Monthly Bulletin for December presents tabular data on the expectation of life at birth and at 1 year of age in over thirty countries," *The Journal of the American Medical Association* for March 18 says. "For all countries covered the expectation of life at birth and in the earlier years of life is greater than in previous periods; the improvement is less striking or absent in later stages of life. The United States ranks high in the list and is exceeded only slightly by the Netherlands, New Zealand, Australia and Sweden. Japan, Russia and India have the lowest expectation of life, according to the latest information available. In all countries females show a longer expectation of life than males."

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## ACCEPTANCE OF BLOOD GROUPING EVIDENCE BY AMERICAN COURTS

When an American court fails to accept authentic blood test evidence it would not seem to be carrying out its responsibilities as an administrator of justice, *The Journal of the American Medical Association* for March 18 says in an editorial on "Blood Grouping Evidence." *The Journal* says:

"In courts of law any child born in lawful wedlock is presumed to be legitimate, and from the earliest days this presumption of legitimacy has been an extremely weighty one. Under the law of the 'four seas' an English court once held that a child born in England was legitimate even though it appeared from the . . . evidence that the husband resided in Ireland during the whole term of his wife's pregnancy and for a long time previously, because Ireland was within the king's domain. . . .

"In a [recent English] divorce proceeding the husband requested a blood test, which proved that he was not the father of his wife's child. (Both husband and wife belonged to type M, while the child belonged to type MN). The test is now generally accepted as proof that a certain man could not have been the father of a certain child. In his decision the judge remarked that at first he was inclined to think, *albeit very reluctantly* (italics ours), he was bound in law to accept the result of the blood group test, not because as a man he thought the doctor was right but because as a magistrate he thought the evidence was legally convincing. However, since the legal presumption of a child born in wedlock being legitimate is very strong, he finally decided not to upset it solely on scientific evidence. Evidently this judge preferred the comfort of adherence to tradition.

"The reaction of American courts to blood test evidence has been reviewed in a book that has just appeared. The problem of paternity arises most frequently in so-called filiation proceedings, less often in divorce actions. In the former the child is born out of wedlock and the mother designates a certain man as father and an action is started to compel him to support the child. In such cases, when the blood tests prove that the defendant is not the father of the child in question, the courts usually accept this result without hesitation, probably because an illegitimate child is involved. (It is highly significant,

that the woman usually confesses to indiscretion with other men besides the defendant after the results of the blood tests are divulged.) In uncontested divorce actions the reaction of the court is likewise favorable. In contested divorce actions, on the other hand, judges apparently prefer to accept the testimony of the wife rather than the objective blood test findings, so that in courts of this country, just as in England, not much progress has been made away from the law of the 'four seas.'

"No doubt the first duty of the court is to see that truth and justice prevail. In the English case cited, the court proudly announced the happy outcome — the husband agreed to make a home for wife and child and accept the child as his own. However, a reconciliation might have been effected without resorting to such subterfuge, because husbands in the past have been known to forgive erring wives and to accept children not their own. When a court refuses to dissolve or annul a marriage of two incompatible people, even though there is scientific proof of the wife's deceit or fraud, as has happened in a number of cases in American courts, the court would not appear to be carrying out its responsibilities as an administrator of justice."

---

## MORE PRESCRIPTIONS FILLED

Although there is an acute shortage of medical doctors in civilian practice, prescriptions filled by the nation's druggists reached a new high in 1943, Dr. E. L. Newcomb, executive vice president of the National Wholesale Druggists' Association, revealed today.

"The volume of drug prescriptions, which normally totals about 200,000,000 a year, was more than 230,000,000 in 1943," said Dr. Newcomb, who interpreted the rise as an indication that the American people are using some of their increased earnings to purchase more adequate medical care.

---

Tuberculosis, syphilis, cancer, heart disease, and other killers of mankind show no signs whatsoever of adopting a forty-hour week; instead, there is every reason to believe that unless society continues to press its fight against them with undiminished vigor we may shortly see an upsurge in their incidence as we did during and following World War I. E. E. Kleinschmidt, M.D., Ohio St. Med. Jour., Mar. 1944.

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"Fainting which may occur in blood donors during the bleeding procedure," *The Journal of the American Medical Association* for May 6 says, "does not have a serious significance. The symptoms are distressing nevertheless. In four blood centers in England the incidence of fainting was relatively small, averaging about 5.5 per cent of the total number of over 5,000 donors. The data collected from 362 blood donors who fainted during the bleeding procedure were studied in comparison with those of 335 unselected donors who did not exhibit subjective or objective symptoms. Evidence was not obtained that factors such as age, occupation, length of wait at the center before bleeding, difficulties in bleeding, length of time since the last meal and presence of menstruation assumed any contributory role in producing or facilitating fainting. Sex appears to be a relatively significant factor in influencing the incidence of fainting. Symptoms were more frequent in women, especially in single women, than in men. Actually the only finding susceptible of control was that a high proportion of donors who fainted gave a history of fainting at previous bleedings or on some other occasions not related to blood donation. This suggests that, whenever possible, these persons should not be used as blood donors. Better and more complete knowledge of the neurocirculatory disturbance and reactions elicited by bleeding is necessary in order to devise controlling measures for the associated symptoms."

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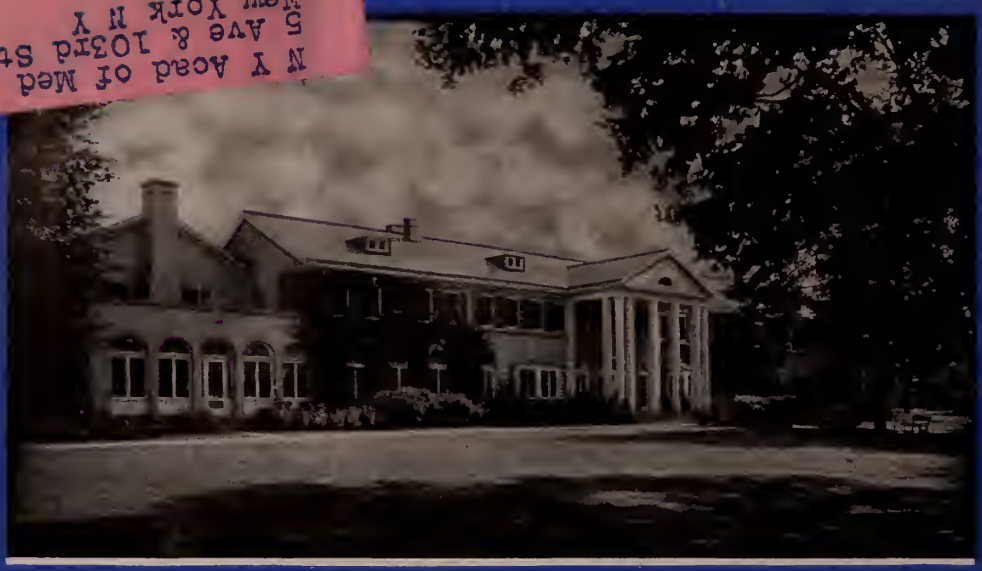
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